U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
PB-276 997

Non-Point Source Studies on Chesapeake Bay. VII. Metals Discharge from the Rhode River Watershed in 1975

Smithsonian Institution, Edgewater, Md

Prepared for

National Science Foundation, Washington, D C Research Applied to National Needs

May 77

NSF/RA-770385

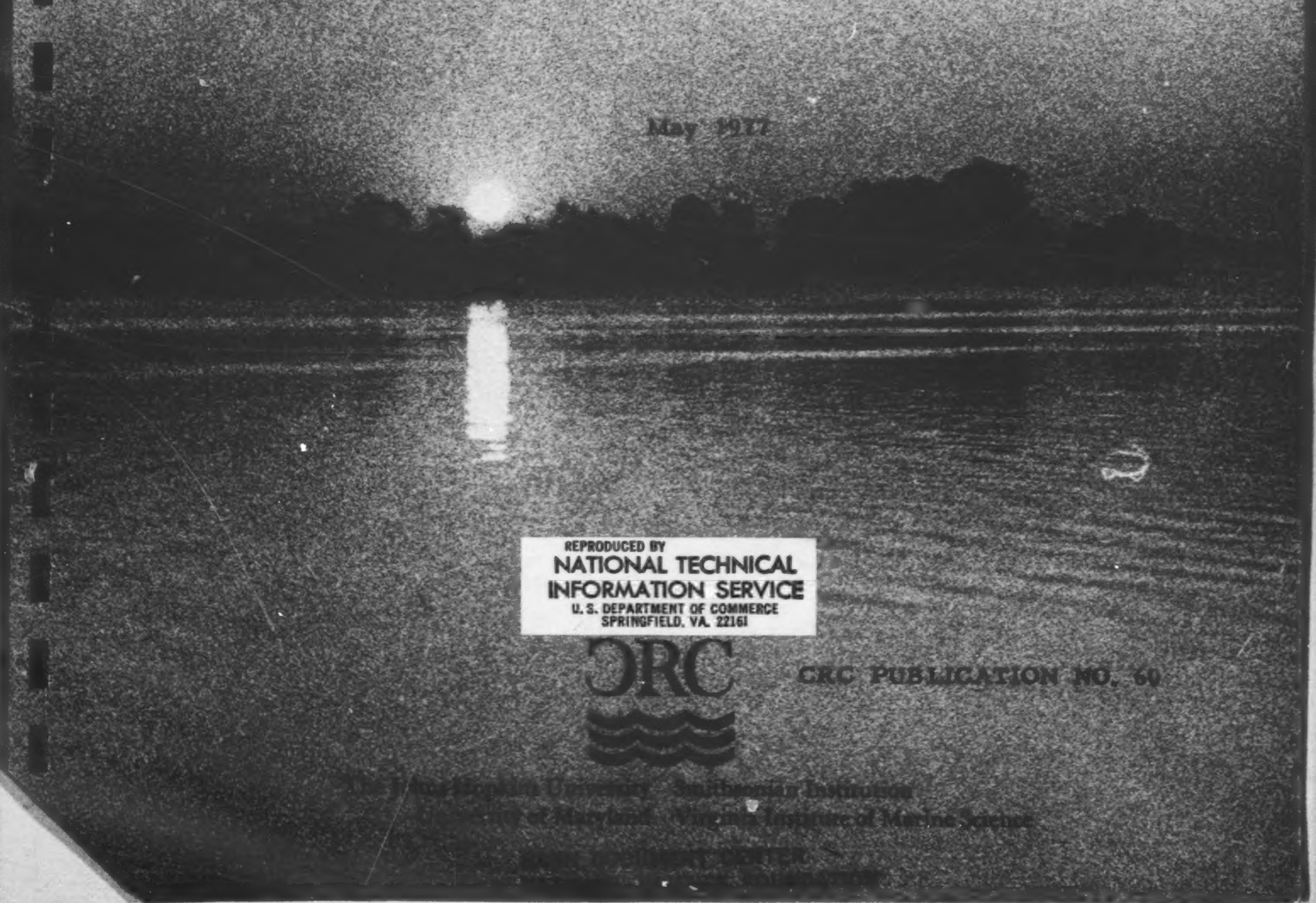
PB 276 997

Chesapeake Research Consortium, Incorporated

NON-POINT SOURCE STUDIES ON CHESAPEAKE BAY:

VII. Metals Discharge from the Rhode River Watershed in 1975

May 1977



REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U. S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

CRC

CRC PUBLICATION NO. 60

The Johns Hopkins University Smithsonian Institution
University of Maryland Virginia Institute of Marine Science
[illegible] CENTER
[illegible]

BIBLIOGRAPHIC DATA SHEET

1. Report No. NSF/RA-770385

2.

3. Recipient's Accession No. PB276997

4. Title and Subtitle
Non-Point Source Studies on Chesapeake Bay, 7: Metals Discharge from the Rhode River Watershed in 1975 (CRC Publication No. 60)

5. Report Date May 1977

6.

7. Author(s)
T. L. Wu

8. Performing Organization Rept. No. CRC Publication No. 60

9. Performing Organization Name and Address
Smithsonian Institution
Chesapeake Bay Center for Environmental Studies
Route 4, Box 622
Edgewater, Maryland 21037

10. Project/Task/Work Unit No.

11. Contract/Grant No. ENV7622045

12. Sponsoring Organization Name and Address
Research Applied to National Needs (RANN)
National Science Foundation
Washington, D.C. 20550

13. Type of Report & Period Covered

14.

15. Supplementary Notes
Also supported by EPA Research Grant No. R804536-01.

16. Abstracts

This study attempts to: (1) determine the water quality (metals composition) in the streams of the Rhode River watershed; (2) estimate the chemical loadings of certain metals due to land runoff from test watershed basins; (3) investigate the relationship between land utilization type and metals area yield; (4) determine the input sources of heavy metals in the runoff water; and (5) study the transport mechanism of metals. In order to study the effect of land utilization on the metals discharge to the receiving water, the land use analysis of each basin was compared with the metals discharge. The metals studied included iron (Fe), manganese (Mn), Zinc (Zn), chromium (Cr), cadmium (Cd), copper (Cu), and lead (Pb). Potassium (K), calcium (Ca), and magnesium (Mg) were also intensively studied because of the large quantities applied to agricultural land as plant nutrients. Calculation of the area yield loading rate of a single land use category was attempted with a statistical modeling system. Small field size basins are now also used to derive area yield loading rates from each land use category. The authors attempt to correlate the area yield of the entire basin with percentage land use.

17. Key Words and Document Analysis. 17a. Descriptors.

Discharge
Effluents
Water pollution
Watersheds
Rivers
Runoff
Particles
Metals
Pollution

17b. Identifiers/Open-Ended Terms

Rhode River
Maryland

17c. COSATI Field/Group

18. Availability Statement NTIS

19. Security Class (This Report) UNCLASSIFIED

20. Security Class (This Page) UNCLASSIFIED

21. No. of Pages 203

22. Price A10-A01

Non-Point Sources Studies on Chesapeake Bay

VII. Metals Discharge from the Rhode River Watershed in 1975

Tung L. Wu

Chesapeake Bay Center for
Environmental Studies
Smithsonian Institution
Route 4, Box 622
Edgewater, Maryland 21037

CRC Publ. #60

Any opinions, findings, conclusions
or recommendations expressed in this
publication are those of the author(s)
and do not necessarily reflect the views
of the National Science Foundation.

TABLE OF CONTENTS

Page No.

Project Goals iv

Introduction 1

Description of the Study Area 3

Description of the Sampling Sites 4

Materials and Methods 6

Precision and Accuracy of Metals Analysis 11

Results 11

  Metals in the Stream Channel Waters 11

  Metals in the Precipitation of the Rhode River Watershed . . . 21

  Metals in the Soil of a Forest Field of Rhode River Watershed 23

  Hydrologic Parameters of Rhode River Watershed 26

Discussion 28

  Water Quality 28

  Metals Loading 30

  Heavy Metal Sources 36

  Metals Area Yield 40

  Metals Transport 45

References 50

Appendix 55

  Iron 55

  Manganese 69

  Zinc 83

  Chromium 97

  Cadmium 111

Page No.

Copper 125

Lead 139

Potassium 153

Calcium 167

Magnesium 181

Note on an error in the labeling of appendix tables.

The units for the last column (area yield) should read µg/watershed for the tables of data on the elements iron, manganese, zinc, chromium, cadmium, copper, lead, potassium (pp 55 - 166). The units for the elements calcium and magnesium are correct as printed. For the area in ha of each watershed see Table 1 on p. 7.

List of Figures

Page No.

Figure 1. Rhode River Drainage Basins 5

Figure 2. Seasonal Loading Rate of Metals 34

Figure 3. Seasonal Loading Rate of Cations 35

Figure 4. Seasonal Flow Rate 37

List of Tables

Page No.

Table 1. Land utilization of the Rhode River watershed basins in the year 1975 7

Table 2. Approximate average slopes of Rhode River basins 8

Table 3. Rainfall of Rhode River watershed during water year 1975 9

Table 4. Precision and accuracy of weir samples (weir 101) 12

Table 5. Precision and accuracy of weir samples (weir 121) 13

Table 6. Precision and accuracy of rainfall samples 14

Table 7. Precision and accuracy study using distilled water 15

Table 8. Metals concentration in stream channels of Rhode River watershed 16

Table 9. Metals concentration in the rainfall of Rhode River watershed 22

Table 10. Metals concentration in the soil of an undisturbed forest of the Rhode River watershed 23

Table 11. Nutritional important cations in the soil of an undisturbed forest of Rhode River watershed 24

Table 12. Oxide table of soil samples from an undisturbed forest of the Rhode River watershed 25

Table 13. Monthly water discharge 26

Table 14. Comparison of metals concentration in water discharged from the Rhode River basins with other study areas - flow-weighted yearly average values 27

Table 15. Flow-weighted yearly average concentration of potassium, calcium, and magnesium 29

Table 16. Yearly metals area yield loading from the seven basins of the Rhode River watershed 31

Table 17. Yearly mass loading of metals from the Rhode River watershed basins 32

Page No.

Table 18. Yearly average elemental ratios (relative to Mn) in the Rhode River watershed 39

Table 19. Seasonal stream output of metals from Rhode River watershed 41

Table 20. 1975 mean seasonal area yield loading rates of three land use categories of the Rhode River watershed 44

PROJECT GOALS

1. To determine the water quality (metals composition) in the streams of the Rhode River watershed.
2. To estimate the chemical loadings of certain metals due to land runoff from test watershed basins.
3. To investigate the relationship between land utilization type and metals area yield.
4. To determine the input sources of heavy metals in the runoff water.
5. To study the transport mechanism of metals.

INTRODUCTION

The concentration of heavy metals and major cations in runoff waters and the discharge of heavy metals and major cations from watershed basins have been under intensive investigation in various parts of the United States (10, 11, 12). The concentrations of heavy metals and their variation in raw water supplies are of prime importance (13). The discharge of metals to the receiving waters is of great concern because of its possible ecological effects on the environment.

In order to understand the metals loading to the Rhode River from its watershed basins, a runoff study of metals from non-point sources was necessary. In order to study the effect of land utilization on the metals discharge to the receiving water, the land use analysis of each basin was compared with the metals discharge. The metals studied included iron (Fe), manganese (Mn), Zinc (Zn), chromium (Cr), cadmium (Cd), copper (Cu), and lead (Pb). Potassium (K), calcium (Ca) and magnesium (Mg) were also intensively studied because of the large quantities applied to agricultural land as plant nutrients. Many of the heavy metals are toxic to the plants and animals of the receiving water. The mode of action of the majority of the toxic metals are believed to be due to enzyme poisoning (6). Metals have been arranged according to their toxicity to eels as (7):

$$\mathrm{Hg} > \mathrm{Cu} = \mathrm{Zn} = \mathrm{Cd} > \mathrm{Ni} = \mathrm{Fe}^{+++} > \mathrm{Fe}^{+} > \mathrm{Ba} > \mathrm{Mn} > \mathrm{K} = \mathrm{Ca} = \mathrm{Mg} > \mathrm{Na}$$

to cyprinodont fish (*Orizias latipes*) as (7):

$$\mathrm{Hg} = \mathrm{Cu} > \mathrm{Cd} > \mathrm{Ba} > \mathrm{K} = \mathrm{Co} > \mathrm{Mn} > \mathrm{Ca} > \mathrm{Mg} = \mathrm{Na}$$

and to *Daphnia magna* as (8):

$\mathrm{Cu} > \mathrm{Hg} > \mathrm{Cd} > \mathrm{Cr} > \mathrm{Zn} > \mathrm{Pb} > \mathrm{Ni}$

Three of the most important sources of metals in the runoff water are (1) chemical weathering of the soil minerals, (2) metals caused by soil pollution due to dry or wet precipitation from the atmosphere and (3) metals and metal compounds that are applied to the soil and water due to various land use practices. Attempts were made to identify possible sources of metals in the runoff water channels.

One of the major goals of the Rhode River watershed study is to determine the effects of variations in land use practices upon runoff from each major land use category (1). The distribution of land utilization type in the Rhode River watershed is very similar to that of the entire bay area. About one-half of the watershed area is developed and the major portion of the developed land is in agricultural usage. Residential area accounts for less than five percent of total land use in the Rhode River watershed. When the land use categories on Rhode River watershed were compared for year 1957 and year 1972, the overall change in the watershed showed decrease in mature forest (5.1%) and cultivated land (10.0%) largely due to the increases in residential area (3.5%), young forest (8.3%) and pasture (1.6%) (4). A change in land utilization will have an impact on the receiving waters due to changes in runoff. Calculation of the area yield loading rate of a single land use category was attempted with a statistical modeling system (9). Small field size basins are now also used to derive area yield loading rates from each land use category. This report will attempt to correlate the area yield of the entire basin with percentage land use.

DESCRIPTION OF STUDY AREA

The Rhode River watershed is situated in a rural area of the Atlantic coastal plain of the Chesapeake Bay. Rhode River is a small estuarine arm of the Chesapeake Bay. In many characteristics, Rhode River is very similar to the Bay proper, itself. The land utilization patterns of the Rhode River watershed are not too different from other parts of the Bay region (36).

The atlantic coastal plain is generally a flat plane made up of sedimentary formations resting on a basement of pre-cambrian crystalline rock. The sedimentary layers of the coastal plain are made up of alternating layers of sand, clay, marl, diatomaceous earth, and gravel. The long period of uplifting and erosion of the sedimentary formations created coastward tilting (2).

The topography of the Rhode River watershed is chiefly rolling upland, much dissected by narrow stream valleys which broaden to level flood plains. Maximum elevation in the watershed is 63 meters at Marriott Hill on the western boundary. Elsewhere the maximum elevation averages 49 meters (3). The Rhode River watershed consists of 3,332 hectares, which drains through many stream channels into the Rhode River estuary.

The soils of the Rhode River watershed are generally sandy or silty and of very light to medium texture. The soils are moderately permeable. The streams of the watershed flow all year except during summer droughts. Major soil minerals include montmorillonite, illite, kaolinite, quartz, and potassium feldspar. Slopes vary widely over the area, but the average slope in each basin is about the same, and about 5 percent (1).

The annual precipitation of Rhode River watershed over a 30-year period is about 102 cm (2). The weather station of CBCES reported a 147.5 cm rainfall for year 1975. July and September had the highest rainfall (224 and 218 cm respectively) for year 1975. 1975 was a wet year when compared with the average rainfall.

Rhode River watershed is situated in a rural area of Anne Arundel County, Maryland. An isosceles triangle has a distance of 30 Kilometer between Washington, D. C. and Baltimore, but about 50 Kilometer from Rhode River watershed to either of these cities. No major combustion plants of coal and fuel oil nor any metal manufacturing plants are located closer than these cities. Since 1950, the population of Anne Arundel County has increased at a rate nearly twice that of the Bi-Metro area (5). When looking at the entire Chesapeake Bay area, it is predicted that over 50 percent of the total population growth in the Chesapeake Bay area between 1970 and 2020 is expected to take place in the Washington, D. C. and Baltimore region (2).

With the increasing rate of population growth, the demand for housing and related developments will become increasingly important. The question of changes in land utilization and their environmental impact, especially the ecology of the Bay itself, has been asked by many who are concerned. In order to meet the need of growth, development is inevitable; in order to maintain the richest resources of the Chesapeake Bay, research that will aid better management and better planning of the development is needed.

DESCRIPTION OF SAMPLING SITES

The geography of the Rhode River watershed and the various subwatershed basins which are under study is shown in Figure 1. In year 1975, eight

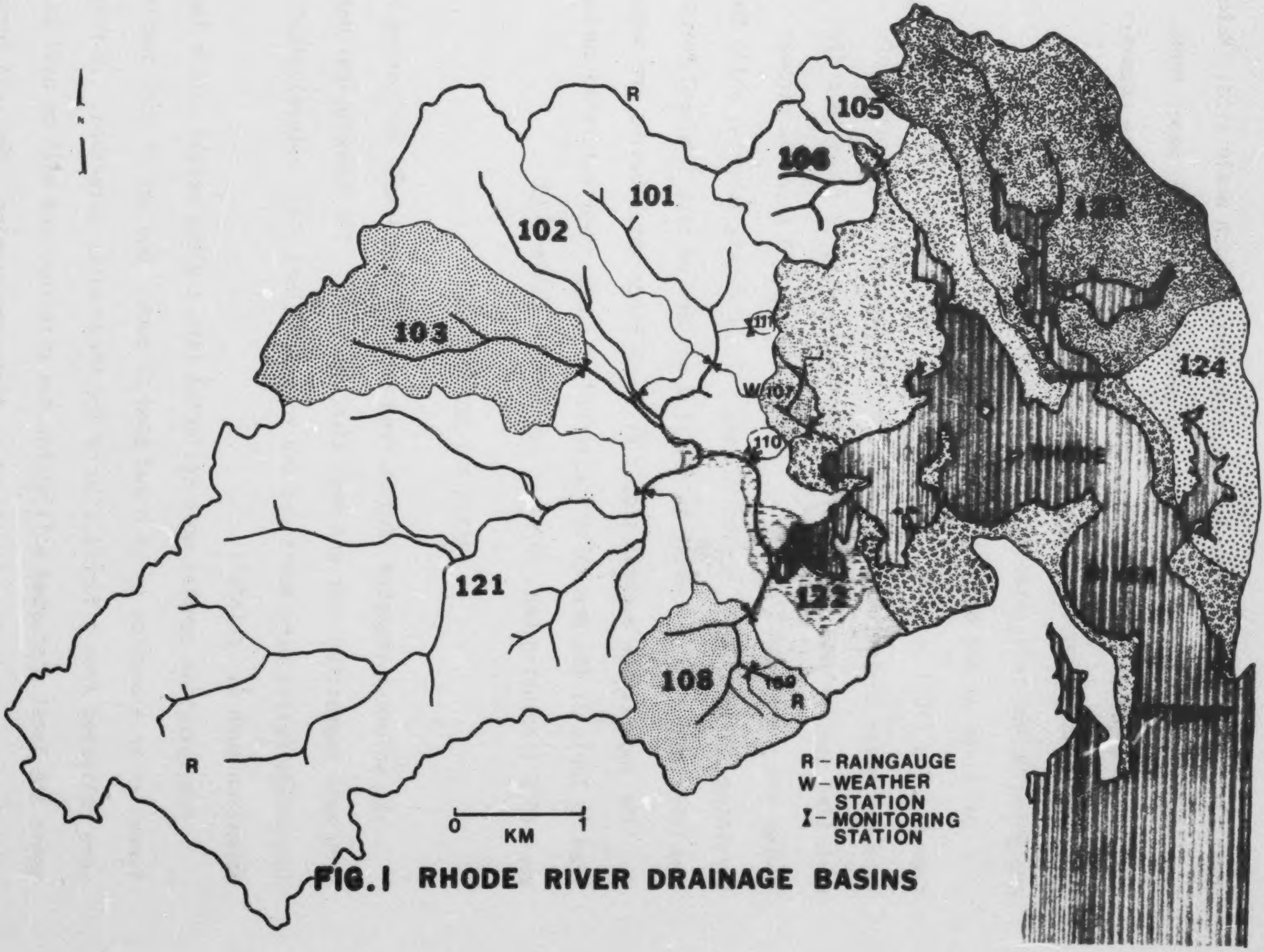

R
101
102
103
105
106
107
W
110
111
121
122
124
108
R
RHODE
R
0
KM
1
R - RAINGAUGE
W - WEATHER STATION
I - MONITORING STATION

FIG. I RHODE RIVER DRAINAGE BASINS

monitoring weir stations were in operation, one at each basin site. Rate of hydrological discharge was monitored every 15 minutes on paper punch tape (1). In order to monitor runoff of metals in these stream channels, the flow weighted concentration of various metals was determined by analyzing volume integrated water samples (1).

The sizes of the eight basins of the Rhode River watershed varied from 28.2 ha (107) to 1229.0 ha (121). Land utilization also varied from one basin to another. The sizes of the basins and percentage of each land use for the eight basins which were monitored for metals discharge are summarized in Table 1. Basins 106 and 108 have the highest percentage of crop land; basins 103 and 107 are mainly forests, while the remaining four basins consist mainly of a mixture of crop land and forest.

The approximate average slopes of these Rhode River basins are summarized in Table 2; the precipitation record of Rhode River watershed during year 1975 (including Dec. 1974) is reported in Table 3 (37).

MATERIALS AND METHODS

The volume-integrated samples from each V-notched weir monitoring station were composited over one week time intervals. The hydrological data (discharge rates) were monitored and recorded along with meterological information such as rainfall.

Precipitation samples were collected into a glass bottle with a large funnel at an elevation of 17 m and used as such. One set of soil samples were collected from a forest site of the Rhode River watershed. It represents the least disturbed soil within the watershed and will be used to compare with the analytical results from discharge samples. The soil cores were divided into surface litter and segments (0-3, 3-5, 5-8, 8-12, 12-18,

Table 1. Land utilization of the Rhode River watershed basins in the year 1975.

Watershed Basin	Total area (ha)	Land Utilization (%)			
		Row Crop	Forest[1]	Pasture	Other[2]
101	225.9	27.9	47.3	19.2	5.5
102	191.8	28.6	50.3	15.1	5.9
103	253.6	6.5	74.4	15.1	4.0
105	37.5	24.7	72.5	2.3	0.4
106	95.3	38.6	53.1	7.2	1.3
107	28.2	8.7	81.8	7.6	2.0
108	150.4	41.0	51.1	6.6	1.2
121	1229.0	21.2	59.4	11.7	7.7

[1] Forest includes upland wet areas, tidal marshes, forest, and old fields.

[2] Includes residential area, roads.

Table 2. Approximate average slopes of Rhode River basins (37).

Basins Above Monitoring Weir Station	Slope (%)
101 (North Branch)	4.0
102 (Blue Jay/Sharps Branch)	4.2
103 (Williamson Branch)	5.8
105 (North Sellman)	9.1
107 (Fox Creek)	5.4
108 (Steinlein)	3.4

Table 3. Rainfall of Rhode River watershed during water year 1975.

Date	Rainfall (cm)
December 1974	9.98
January 1975	11.02
February 1975	6.38
March 1975	14.96
April 1975	7.14
May 1975	11.94
June 1975	8.64
July 1975	21.64
August 1975	14.66
September 1975	21.84
October 1975	9.07
November 1975	4.88
December 1975	14.53

18-24, 24-30 cm) (38). Composited segments were oven dried at 60° C, ground and sieved through an 800 um plastic sieve, one gram of the dry soil was then boiled consecutively with 5 ml of concentrated nitric acid and 5 ml of distilled water. The contents were made to 10 ml with distilled water. The solution was then analyzed by atomic absorption.

The metals were determined with an atomic absorption spectophotometer. Probably the most convenient method in the literature for metals determination is the one described in "Standard Methods for the Analysis of Water and Wastewater". Essentially, the method used one ml of concentrated nitric acid per 100 ml of water sample and the sample was autoclaved at 120°C for one hour to solubilize the particulate matter. The concentration so determined is the "total" acid leachable to distinguish from the dissolved and particulate terms as generally encountered in the literature.

The metals analysis of the Rhode River watershed studies is primarily the above mentioned method with some modification to increase the detection limits.

Five hundred mls of unfiltered water sample was measured into a 650 ml Kjeldahl flask which was prewashed with diluted acid solution and distilled water. Five ml of concentrated nitric acid was added to the flask, and the content of the macro Kjeldahl flask was boiled down to about 10 ml. The volume of the liquid was then accurately measured. This solution was analyzed directly with a Jarrel-Ash 82-500 atomic absorption spectrophotometer for trace metals content (Ni, Cu, Zn, Pb, Cr and Cd); and usually a fourty fold dilution of this liquid is used to determine other metals (Mn, Fe, K, Ca and Mg).

PRECISION AND ACCURACY OF METALS ANALYSIS

Precision refers to the reproducibility of replicate samples. A precision study of standard solutions with similar (or no) interferring material will indicate the performance of an analytical instrument and its operator. In the metals project of the Rhode River watershed study, actual field samples were used. The samples are the weekly integrated weir, rain or ground water samples.

Accuracy refers to a degree of difference between observed and true values. Accuracy of metals concentration is estimated by percentage recovery after the addition of a known quantity to the natural water samples(41).

$$\% \text{ Recovery} = \frac{\text{Mean Spike}}{\text{Addition} + \text{Mean Sample}} (100)$$

The precision of replicate water samples and recovery efficiency of "spiked" samples were determined in a series of tests, and are reported in Tables 4 to 7. The mean values and the coefficient of variance (CV) for the metals studied are reported. Coefficient of variance is the ratio of standard deviation to the mean value expressed as a percentage.

RESULTS

Metals in the Stream Channel Waters

The metals concentrations of weekly volume-integrated samples are reported in the appendix. The flow weighted mean concentration of each month is reported in Table 8. Results for December 1974 to December 1975 for heavy metals which include iron, manganese, zinc, chromium, cadimium, copper, and lead are reported. Metals of nutritional importance such as potassium, magnesium, and calcium are also reported. Flow weighted concentrations of iron (Fe) were lowest (331 ug/1) during the month of April at weir 103, and

Table 4. Precision and accuracy of weir samples (weir 101).

	Ni	Cu	Zn	Pb	Cr	Cd	Mn	Fe	K	Ca	Mg
Sample											
$\overline{X}$ (ug/l)	9.1	0	26.9	0	18.8	.77	44.1	1625	2395	2075	2498
N	3	3	3	3	3	3	3	3	3	3	3
CV	13.5	-	3.1	-	16.0	10.4	7.3	14.6	3.7	4.0	5.1
Addition (ug/l)	21.8	20.0	40.0	20.0	20.0	20.0	200	400	1200	720	720
Theoretical amount	30.9	20.0	66.9	20.0	38.8	20.8	244	2025	3595	2795	3218
Spiked Sample											
$\overline{X}$	20.3	17.2	55.2	13.4	32.2	19.0	274	1637	3132	2236	3215
N	4	4	4	4	4	4	4	4	4	4	4
CV	5.6	13.7	4.2	23.8	14.7	7.2	11.0	4.7	10.9	2.1	4.4
% Recovery	66	86	83	67	83	95	112	81	87	80	100

Table 5. Precision and accuracy of weir samples (weir 121)

	Ni	Cu	Zn	Pb	Cr	Cd	Mn	Fe	K	Ca	Mg
Sample											
$\overline{X}$ (ug/l)	10.0	0	30.6	0	9.7	1.12	343	2927	1883	3267	2030
N	2	2	2	2	2	2	2	2	2	2	2
CV	1.5	-	26.7	-	13.4	.9	7.1	16.6	1.5	1.5	3.5
Addition (ug/l)	21.8	20.0	40.0	20.0	20.0	20.0	200.0	400.0	1200.0	720.0	720.0
Total Theoretical Amount (ug/l)	31.8	20.0	70.6	20.0	29.7	21.1	543	3327	3083	3987	2750
Spiked Sample											
$\overline{X}$	22.7	15.9	55.4	22.0	25.1	20.0	563.8	3110	2870	3501	3110
N	5	5	5	5	5	5	5	5	5	5	5
CV	6.0	11.7	9.1	5.9	7.6	3.2	15.6	10.9	3.4	6.3	7.3
% Recovery	71	80	78	110	85	95	104	94	93	88	113

Table 6. Precision and accuracy of rainfall samples

	Ni	Cu	Zn	Pb	Cr	Cd	Mn	Fe	K	Ca	Mg
Sample											
$\overline{X}$(ug/l)	4.2	0	163.3	0	7.1	2.5	136.4	256.6	59.1	664.3	54.3
N	3	3	3	3	3	3	3	3	3	3	3
CV	4.4	-	5.9	-	4.4	5.3	11.6	4.4	11.3	4.4	7.7
Addition	21.8	20.0	40.0	20.0	20.0	20.0	200.0	400.0	400.0	240.0	240.0
Theoretical Total	26.0	20.0	203.3	20.0	27.1	225	336.4	656.6	459.1	904.3	294.3
Spiked Sample											
$\overline{X}$	19.1	19.6	208.7	15.6	20.8	19.8	362.3	729.8	408.8	867.1	276.5
N	6	6	6	6	6	6	6	6	6	6	6
CV	10.6	4.6	20.4	12.3	9.4	7.6	8.5	5.9	5.3	6.0	7.5
% Recovery	73	98	103	78	77	88	108	111	89	96	94

Table 7. Precision and accuracy study using distilled water

	Ni	Cu	Zn	Pb	Cr	Cd	Mn	Fe	K	Ca	Mg
Sample											
$\overline{X}$ (ug/1)	0	0	0	0	0	0	0	4.6	6.4	0	1.6
N	11	11	11	11	11	11	11	11	11	11	11
CV	-	-	-	-	-	-	-	177	60	-	138
Addition (ug/1)	21.8	20.0	40.0	20.0	20.0	20.0	200.0	400.0	400.0	240.0	240.0
Total Theoretical Amount	21.8	20.0	40.0	20.0	20.0	20.0	200	405	406	240	242
Spiked Sample											
$\overline{X}$	15.6	18.2	40.6	17.0	18.9	18.8	161	367	388	140	247
N	3	3	3	3	3	3	3	3	3	3	3
CV	20	4.9	4.6	14	4.3	12	21	5.1	7.8	3.8	17
% Recovery	72	91	101	85	95	94	81	91	96	58	102

Table 8. Metals Concentration in Stream Channels of Rhode River Watershed (ug/l)

	Weir						
Year-Month	101	102	103	105	106	107	108
			Fe				
1974 - 12	1618	1328	742	——	——	1747	1720
1975 - 1	803	721	883	813	851	3821	558
1975 - 2	933	626	1212	626	722	3305	393
1975 - 3	10996	3105	3077	3653	4319	4302	1621
1975 - 4	1458	478	331	462	772	2303	425
1975 - 5	2329	658	1155	980	3015	4631	1450
1975 - 6	4878	6641	9652	4673	7301	21525	6958
1975 - 7	19974	5702	6863	7842	25558	9291	6557
1975 - 8	6727	4429	3175	6428	10298	8868	5322
1975 - 9	5165	3899	6144	4967	9945	2480*	3917
1975 - 10	1261	1667	1049	1539	1845	764*	8097
1975 - 11	1318	2106	1245	939	2406	766*	4226
1975 - 12	1224	3904	1587	1161	1841	995*	2237
			Mn				
1974 - 12	173	150	108	——	——	165	223
1975 - 1	154	132	121	148	199	142	167
1975 - 2	127	80	88	96	186	169	158
1975 - 3	200	122	129	164	253	158	103
1975 - 4	92	87	40	124	101	106	80
1975 - 5	117	139	73	111	257	89	104
1975 - 6	104	420	153	165	273	47	128
1975 - 7	81	84	72	42	301	92	56
1975 - 8	88	61	61	123	79	93	67
1975 - 9	120	120	152	126	169	30*	108
1975 - 10	88	103	123	183	164	122*	630
1975 - 11	75	114	118	155	154	86*	128
1975 - 12	111	259	156	168	178	119*	181

Table 8 - continued

Year-Month	101	102	103	105	106	107	108
				Zn			
1974 - 12	17.06	52.51	23.78	—	——	9.59	36.39
1975 - 1	13.77	12.17	15.15	18.17	12.91	16.20	23.37
1975 - 2	9.65	10.46	10.62	13.26	11.96	10.55	14.41
1975 - 3	29.11	15.97	17.76	14.65	30.87	25.42	20.30
1975 - 4	8.73	10.20	5.68	7.79	6.05	12.45	11.95
1975 - 5	5.49	5.91	5.11	6.17	5.79	14.36	9.27
1975 - 6	20.40	31.54	42.72	10.46	23.99	88.48	21.84
1975 - 7	116.29	48.76	46.37	51.74	137.08	51.14	41.50
1975 - 8	59.81	41.37	23.96	46.18	61.44	63.42	27.17
1975 - 9	31.19	19.66	22.93	20.73	32.45	47.90*	15.65
1975 - 10	17.98	18.14	11.30	35.59	13.32	14.00*	12.07
1975 - 11	9.72	4.92	8.49	8.58	11.22	12.00*	10.25
1975 - 12	51.73	23.52	23.60	14.52	21.45	17.00*	23.13
				Cr			
1974 - 12	3.83	4.19	1.82	—	—	7.83	4.00
1975 - 1	0.86	0.49	0.86	3.29	0.90	11.59	0.54
1975 - 2	2.19	2.72	1.52	1.76	5.12	13.93	0.56
1975 - 3	15.98	23.11	9.78	21.67	11.29	15.08	16.43
1975 - 4	1.08	31.24	4.78	4.90	0.72	2.44	1.56
1975 - 5	2.63	0	25.66	3.09	2.72	4.75	20.19
1975 - 6	35.79	28.26	27.09	3.23	10.33	61.65	37.59
1975 - 7	56.48	20.79	18.19	36.43	83.73	31.61	43.46
1975 - 8	32.37	30.85	22.41	14.81	70.97	47.01	12.03
1975 - 9	27.43	24.62	27.83	11.51	63.19	9.91*	14.52
1975 - 10	41.15	1.92	0	14.35	7.40	1.6*	10.04
1975 - 11	0	0	0	0	4.67	0*	8.85
1975 - 12	0	0	4.98	3.05	0	0*	0

Table 8 - continued

	Weir						
Year-Month	101	102	103	105	106	107	108
			Cd				
1974 - 12	1.15	0.76	1.16	—	—	0.80	1.13
1975 - 1	0.30	1.54	0.58	0.26	0.21	0.23	1.57
1975 - 2	1.53	0.35	0	0	0	0	0
1975 - 3	0	0	0	0	0	0	0
1975 - 4	0	0	0	0	0	0	0
1975 - 5	0	0	0	0	0	0	0
1975 - 6	1.19	1.56	2.25	0.94	1.18	2.73	1.35
1975 - 7	3.84	2.17	2.50	1.61	3.10	1.82	1.94
1975 - 8	2.45	1.69	2.12	2.85	2.66	2.91	2.28
1975 - 9	0.35	0.25	0.18	0.17	0.27	1.96*	0.16
1975 - 10	0.37	0.47	0.26	1.21	0	0*	0.22
1975 - 11	0.32	0.64	0.85	0.65	0.74	0*	0.29
1975 - 12	0.82	0	0	0	1.07	0*	0
			Cu				
1974 - 12	1.35	6.64	2.13	—	—	1.28	3.25
1975 - 1	0.43	1.18	0.56	0.91	0.35	1.65	0.43
1975 - 2	0	1.52	0	0	0	0	2.71
1975 - 3	6.80	5.46	4.56	5.24	6.91	5.06	5.23
1975 - 4	2.04	2.14	1.94	1.03	3.13	2.70	2.55
1975 - 5	0	0	0	0	0	0	0
1975 - 6	0	2.42	4.93	0	1.29	9.00	0.59
1975 - 7	6.90	0	1.70	2.10	8.84	4.02	1.83
1975 - 8	1.59	1.44	0	2.19	3.43	4.02	0
1975 - 9	8.72	0	6.42	6.18	9.27	0*	0
1975 - 10	2.32	0.52	4.07	2.59	1.45	2.5*	1.49
1975 - 11	3.14	5.27	2.59	3.08	3.91	2.6*	2.30
1975 - 12	3.79	2.50	3.14	3.80	4.81	1.9*	2.37

Table 8 - continued

	Weir						
Year-Month	101	102	103	105	106	107	108
				Pb			
1974 - 12	—	—	—	—	—	—	—
1975 - 1	0	0	0	0	0	0	0
1975 - 2	0	0	0	0	0	0	0
1975 - 3	0	0	0	0	0	0	0
1975 - 4	0	0	0	0	0	0	0
1975 - 5	0	0	0	0	0	0	0
1975 - 6	1.15	.91	12.52	1.52	8.11	58.17	1.99
1975 - 7	3.14	.56	11.64	3.82	15.52	12.96	11.37
1975 - 8	18.06	13.56	4.33	3.82	23.76	27.08	11.80
1975 - 9	58.78	45.91	43.14	41.43	35.56	15*	50.50
1975 - 10	33.24	32.32	45.88	36.56	29.08	41*	24.67
1975 - 11	21.66	28.16	35.50	19.46	35.17	16*	39.81
1975 - 12	4.16	8.00	7.55	2.90	10.46	21*	7.69
				K			
1974 - 12	3992	2892	2974	--	--	5203	3007
1975 - 1	2535	2755	2004	2144	2274	4536	2148
1975 - 2	1701	1657	1482	1269	1468	1685	1519
1975 - 3	2979	2282	1785	1709	3019	2735	1657
1975 - 4	2090	2092	1757	1583	1640	2650	1740
1975 - 5	2363	2077	2122	1726	2518	3978	1925
1975 - 6	3315	2965	2932	2092	3583	5248	2582
1975 - 7	4030	5886	2963	2472	9329	3578	3341
1975 - 8	3951	8576	2476	2735	13318	4015	2911
1975 - 9	3504	10271	2901	2711	94713	3379	2687
1975 - 10	2698	8992	1649	2588	2630	2437*	3008
1975 - 11	2448	11501	1742	1965	3115	2375*	2174
1975 - 12	2075	10447	1720	1428	1966	2069*	1572

Table 8 - continued

	Weir						
Year-Month	101	102	103	105	106	107	108
				Ca			
1974 - 12	7900	2096	8266	--	--	8482	5376
1975 - 1	6323	7128	7130	3201	5297	6455	6151
2	6985	10049	6861	3714	5135	8112	7084
3	3581	4277	6704	1833	3255	7138	7733
4	7599	7771	7552	3438	5073	8977	7788
5	6409	7431	7541	2640	3556	7315	7547
6	3658	4604	4036	2696	2772	3759	4060
7	1020	6117	3561	622	606	2498	1832
8	408	3233	3358	812	1549	2381	2831
9	2506	5928	2726	562	16141	4307	2355
10	3804	15848	6429	2836	9212	6442*	8686
11	4468	15737	6643	2058	3368	4253*	3517
12	4009	21101	4267	2008	3666	5200*	5276
				Mg			
1974 - 12	2905	1758	2198	--	--	2119	2581
1975 - 1	2495	2658	2154	1833	2353	3562	2126
2	3045	2795	2488	1864	2604	4151	2505
3	3525	2649	2500	1904	3033	4878	2719
4	2980	2691	2684	2005	2409	3948	2605
5	2870	2777	2343	1807	2548	3806	2809
6	2745	3334	2453	2242	2945	8223	2664
7	2684	2681	2317	1415	3895	4605	2100
8	2002	2462	1819	1271	2234	6296	2282
9	2628	2149	1417	998	3124	2503	1505
10	2712	2307	2191	1178	2790	3967*	3830
11	2949	2779	2345	1458	2477	3716*	3115
12	2570	3001	2226	1898	2550	3526*	2816

highest (25558 ug/l) at weir 106 in July. Manganese concentration in the Rhode River stream channels showed a range from 42 ug/l in July (weir 105) to 630 ug/l (weir 108) in October. Zinc in the Rhode River streams ranged from 4.92 ug/l (November, weir 102) to 137 ug/l (July, weir 106). Chromium, cadmium, copper and lead concentrations changed from nondetectable to 56 ug/l (Cr, weir 101, July); 2.85 ug/l (Cd, weir 105, August); 9.27 ug/l (Cu, weir 106, September); and 58 ug/l (Pb, weir 101, September). Concentrations of potassium, calcium, and magnesium in these drainage channels are generally higher than those for heavy metals concentrations. Potassium changed from 1519 ug/l to 94713 ug/l, calcium varied between 408 ug/l to 21101 ug/l; and magnesium had a concentration range of 998 ug/l to 8223 ug/l.

Metals in the Precipitation of the Rhode River Watershed

The depths of rainfall and the metals concentration in bulk precipitation were reported in the baseline data report of CBCES (14). Table 9 reports the volume weighted mean values of metals, based on the amount of rainfall. Iron (Fe) in the rainwater varied from 46 to 190 ug/l. Manganese concentrations changed from 1.8 ug/l to 125 ug/l. Zinc concentration in the rainwater of Rhode River watershed showed a fairly high value and an interesting concentration range from 30 ug/l to the average of 500 ug/l in the summer months of June, July, August, and September. Heavy metals such as chromium, copper, and cadmium concentrations in the rainwater of Rhode River watershed varied from nondetectable to around 15 ug/l. The lead concentration in rainwater can be very low (in winter months) and very high(about 40 ug/l in fall). Metallic plant nutrients in the rainwater were higher than heavy metal concentrations, (Potassium 80 - 270 ug/l; calcium 292 -

Table 9. Metals concentration in the bulk precipitation of Rhode River watershed (ug/1)

Month	Fe	Mn	Zn	Cr	Cu	Cd	Pb	K	Ca	Mg
1974										
12	-	-	-	-	-	-	-	-	-	-
1975										
1	75.99	5.05	46.34	1.00	0	0.72	0	150	581	118
2	143.04	2.83	34.78	.51	5.83	2.74	0	80	1300	248
3	185.78	1.77	30.40	6.28	3.47	0	0	121	1910	340
4	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-
6	70.08	3.88	760.72	9.65	5.27	2.63	17.03	310	1732	133
7	190.90	125.52	334.90	14.14	.30	2.97	4.56	115	431	304
8	53.76	2.53	555.38	2.23	9.82	4.85	7.38	118	1637	71
9	46.75	26.71	520.92	0	0	6.35	16.63	97	4180	72
10	52.05	39.53	45.10	6.66	1.23	2.88	23.23	140	292	146
11	12.12	35.29	34.34	4.26	3.91	15.40	41.96	270	1093	215

1732 ug/l and magnesium 71 - 215 ug/l). It appears that Mn, Cr, and Zn are higher in the 1975 precipitation of the Rhode River watershed than the average rainfall values of the United States (39).

Metals in the Soil of a Forest Field of Rhode River Watershed

Composited soil samples from a mature forest of Rhode River watershed were studied for heavy metals content. Metals concentration in the soil profile and in the detritus material are quite different. The results are reported in Table 10. When compared with the heavy metal concentration in the earth crust (40), the soil samples from the Rhode River watershed generally showed a lower content of all the seven metals studied.

Table 10. Metals concentration in the soil of an undisturbed forest of the Rhode River watershed (ug/g).

	Fe	Mn	Zn	Cr	Cu	Cd	Pb
Detritus	4439	15.1	71.6	6.9	35.8	1.6	25.9
0-3 cm	2340	122.2	10.2	5.7	0.76	0.3	7.4
3-5	9003	143.2	24.0	11.4	2.6	-	1.1
5-8	9869	127.7	9.4	7.0	2.3	-	-
8-12	9172	170.7	1.0	11.4	3.4	-	-
12-18	6041	147.3	3.5	6.5	3.2	-	-
18-24	17031	146.8	23.9	25.8	3.2	-	-
24-30	6618	180.3	13.8	9.6	2.5	-	-

- Below detection limit

The nutritional important cations in the soil were also analyzed by atomic absorption. The results are reported in Table 11.

Table 11. Nutritional Important Cations in the Soil of an Undisturbed Forest of the Rhode River Watershed (ug/g).

	K	Ca	Mg
Detritus	837	10326	1178
0-3 cm	488	-	841
3-5	472	-	790
5-8	370	-	564
8-12	535	-	803
12-18	422	-	608
18-24	602	-	883
24-30	692	-	1051

- not detectable

The complete elemental composition of the soils from this study site were analyzed with the aid of an electron microprobe (courtesy Department of Mineral Science, Smithsonian Institution); the results are reported in Table 12.

Table 12. Oxide table of soil samples from an undisturbed forest of the Rhode River watershed (ug/g).

Depth	SiO_2	Al_2O_3	FeO	MgO	CaO	K_2O	Na_2O	TiO_2	MnO	Total (%)	% Volatile
litter	9.399	57.795	.921	1.347	4.027	1.225	.589	.162	.040	75.506	24.494
0- 3 cm	-	-	-	-	-	-	-	-	-	-	-
3- 5 cm	70.964	8.217	2.766	.375	.157	1.510	.462	.921	.084	85.456	14.544
5- 8 cm	78.906	8.106	2.989	.504	.196	1.618	.452	.922	.057	93.751	6.249
8-12 cm	79.903	8.260	2.966	.402	.146	1.719	.432	.976	.040	94.863	5.137
12-18 cm	-	-	-	-	-	-	-	-	-	-	-
18-24 cm	78.400	10.356	3.558	.660	.170	1.952	.452	1.054	.058	96.662	3.338
24-30 cm	76.760	10.738	3.770	.582	.169	1.909	.451	1.091	.056	95.526	4.474

Hydrologic Parameters of the Rhode River Watershed

Hydrologic records for the Rhode River watershed have been maintained by CBCES. Currently eleven weir monitoring stations are in operation. The stream flow through each weir is monitored and the record is entered into CBCES data bank (1,37). Table 13 shows the monthly discharge of the seven weir stations monitored in 1975.

Table 13. Monthly Water Discharge

Month	Flow (10^4 1/Ha)						
	101	102	103	105	106	107	108
Dec. 1976	8.38	9.35	4.29	*	*	3.69	7.64
Jan. 1977	28.53	32.14	22.51	29.06	22.69	36.33	25.49
Feb.	26.83	28.77	10.45	29.19	22.16	39.99	25.34
March	53.50	64.86	57.59	68.40	56.01	71.14	44.50
April	28.99	27.05	29.25	27.98	17.88	36.27	29.48
May	41.91	44.15	48.72	43.41	54.08	47.79	48.63
June	8.97	7.61	11.26	3.92	15.17	12.00	13.05
July	35.43	45.14	34.29	40.01	41.40	36.42	53.72
August	15.17	17.84	11.31	9.68	13.26	10.23	17.37
Sept.	44.98	55.43	38.81	65.55	59.09	-	82.15
Oct.	61.22	36.32	34.70	35.26	37.45	-	48.93
Nov.	27.06	25.99	26.51	23.43	24.62	-	31.65
Dec.	20.53	19.26	21.07	15.01	17.97	-	23.54

- weir was broken
* no data

Table 14. Comparison of metals concentration in water discharged from the Rhode River Basins with other study areas - Flow-weighted yearly average values

	Metal (ug/l)						
Location	Fe	Mn	Zn	Cr	Cd	Cu	Pb
RRW - 101	5470	122	29	19	0.7	3.6	15*
RRW - 102	2573	116	20	14	0.7	1.9	12
RRW - 103	2933	105	18	13	0.6	2.8	15
RRW - 105	3043*	129*	21*	13*	0.5*	2.9*	12*
RRW - 106	6853*	210*	34*	27*	0.6*	4.3*	14*
RRW - 107	5293+	126+	26+	16+	0.5+	2.7+	4.9+
RRW - 108	3692	168	19	16	0.6	1.6	17
Minnesota (31)	1350	60	80	—	—	40	50
Northeast U. S. (11)	—	—	96	—	—	15	17
Southeast U. S. (Beck, 1973)	80 - 1500	10 - 170	—	—	—	—	—
Lake Erie (11)	—	—	205	—	—	11	39
U. S. (11)	—	—	64	—	—	15	23
Ave. River (40)	670	5	10	1	—	5	3
Ocean (35% (40)	3	2	5	0.6	0.5	3	.03

*Based on 11 months data (January, 1975 to November, 1975)

+Weir broken during October and November,1975

DISCUSSION

Water Quality

The water quality in the stream channels of the Rhode River watershed were analyzed with respect to two major groups of chemicals: (1) toxic substances such as heavy metals, and (2) dissolved solids such as metalic cations because they are important plant nutrients.

Flow weighted yearly average values of heavy metals from the seven stream channels are summarized in Table 14. Published results from other study areas are also included in Table 14 for comparison. The concentrations varied from basin to basin for each metal. The heavy metals concentrations generally decreased in the order of $Fe > Mn > Zn > Cr > Pb > Cu > Cd$. The highest Fe concentration is about 10^4 fold higher than the lowest concentration of Cd. The metals concentration from this study seem to indicate that, when compared with average values of U.S. river and stream channel discharge, Fe and Mn are discharged at higher levels, while Zn, Cu, and Pb are discharged at lower levels from the Rhode River watershed. Fe and Mn are more likely to be derived from nature, while metals like Cd, Cr, Pb, and Zn are more toxic and are more likely to have anthropogenic origins.

The high iron content in the runoff water of Rhode River stream channels, and the low enrichment factor as compared with the watershed soil (as will be discussed later in this report) indicates the severe erosion problem of the Rhode River watershed. As a matter of fact, soil erosion from Rhode River watershed and siltation of the estuary itself have been severe since initial European settlement and clearing of the forest in 1650. Extensive salt marshes have been developed along the lower course of Muddy Creek and around its mouth.

The available data on the depth of the Rhode River indicate progressive shoaling since the initial surveys in 1846 (3).

The flow weighted yearly average concentrations of potassium, calcium, and magnesium are summarized in Table 15. All three are essential plant nutrients. Potassium is supplied to plant roots by natural sources in the soil and by fertilizers, manures, and mulches. Potassium is one of the three major fertilizer elements (N,P & K) that are applied to crops each year in large quantities. Finely ground limestone ($CaCO_3$), dolomite [$CaMg(CO_3)_2$], basic slag (a byproduct of the steel industry), marl, chalk and oyster shells, are generally used for adjusting soil pH and as a supply for calcium and magnesium. Liming to reduce soil acidity is an extensive and routine practice in the Rhode River watershed and in the entire Chesapeake Bay region. Soil acidity develops gradually as calcium and magnesium are slowly lost from the soil by leaching.

Table 15. Flow-weighted yearly average concentration of potassium, calcium and magnesium (ug/l).

	Metal (ug/l)		
	K	Ca	Mg
RRW - 101	2832	4357	2844
RRW - 102	5549	8318	2592
RRW - 103	2126	5822	2249
RRW - 105	2061	2037	1585
RRW - 106	18192	5840	2871
RRW - 107	3294	6553	4420
RRW - 108	2375	5258	2514

The temporal variation of metals concentrations in the runoff water from Rhode River upland is evident and is demonstrated in Table 8. Lead concentration in runoff water was higher in August, September, October and November, with the month of September showing highest lead concentration in runoff waters. Chromium and zinc concentration was higher in March, June, July, August and September. Their concentration was generally the highest in July. June, July and August concentrations of cadimium were higher than in the remaining months during year 1975. Copper and manganese results did not indicate a clear trend. The July iron concentrations in the runoff water were the highest. Potassium, calcium and magnesium concentrations in the runoff channels did not indicate any clear trend which could easily be matched up with agricultural practices.

Metals Loading

The yearly total loadings of metals were obtained for year 1975 and are reported in Table 16. The metals loading ranged from about 10 to 25 Kg/ha for iron and 7 to 67 Kg/ha for potassium to 1.5 to 2.7 g/ha for cadmium, with metals loading for Mn, Zn, Cr, Cu, Pb, Ca and Mg inbetween these values.

In order to estimate the total yearly mass loading from the entire Rhode River watershed to its receiving water, the area-weighted mean yearly loading values are tabulated in Table 17. Table 17 showed that the metals loading from the seven watershed basins monitored during year 1975 ranged from 23 Kg of cadmium to that of 14,461 Kg of iron, 16,796 Kg of potassium, 20,854 Kg of calcium and 9,639 Kg of magnesium.

Table 16. Yearly metals area yield loading from the seven basins of the Rhode River watershed (g/ha)

Weir	Fe	Mn	Zn	Cr	Cd	Cu	Pb	K	Ca	Mg
101	19,613	439	105	69	2.7	13	49*	10,656	15,880	10,314
102	10,153	460	78	57	2.5	7.6	48*	20,955	30,355	10,149
103	9,669	346	59	43	1.9	9.2	48*	7,280	19,525	7,613
105	11,437*	486*	78*	48*	1.7*	11*	47*	8,209*	7,174*	10,312*
106	24,997*	756*	124*	97*	2.2*	16*	52*	67,252*	23,130*	10,795*
107	15,789+	369+	78+	47+	1.5+	8.2+	14+	9,816+	19,527+	13,171+
108	15,799	716	81	68	2.5	6.6	75*	10,171	23,073	10,936

* Based on 11 months (January to November, 1975)

+ Based on 10 months (weir broken October and November, 1975)

Table 17. Yearly mass loading of metals from the Rhode River watershed basins (Kg)

Weir	Fe	Mn	Zn	Cr	Cd	Cu	Pb	K	Ca	Mg
101	4,430	99	24	16	0.6	3	11	2,407	3,587	2,330
102	1,947	88	15	11	0.5	1.5	9	4,019	5,822	1,946
103	2,452	88	15	11	0.5	2.3	12	1,846	4,951	1,931
105	429	18	3	2	0.1	0.4	2	308	269	387
106	2,382	72	12	9	0.2	1.5	5	6,409	2,204	1,029
107	445	10	2	1	0.04	0.2	0.4	277	551	371
108	2,376	108	12	10	0.4	1.0	12	1,530	3.470	1,645
Total	14,461	483	83	60	2.3	9.9	51.4	16,796	20,854	9,639

The total area of the seven basins is 982.7 ha. The entire Rhode River watershed has an area of 3,332 ha. The metals loading during year 1975 from non-point sources of the entire Rhode River watershed is estimated as follows:

Iron (Fe)	49,032 Kg (~49 tons)
Manganese (Mn)	1,638 Kg (~1.6 tons)
Zinc (Zn)	281 Kg
Chromium (Cr)	203 Kg
Cadmium (Cd)	7.3 Kg
Copper (Cu)	34 Kg
Lead (Pb)	174 Kg
Potassium (K)	56,950 Kg (~57 tons)
Calcium (Ca)	70,709 Kg (~71 tons)
Magnesium (Mg)	32,682 Kg (~33 tons)

The seasonal metals loading rate is reported in Figure 2 and Fig. 3. In order to include relatively large loading differences for different metals, and to indicate the seasonal change for each metal, a gradual change of scale on the loading axis was used for Figures 2 and 3. Turner (23) reported a direct relationship of the water discharge and the loadings of dissolved constituents such as dissolved silicon, dissolved nitrate, and dissolved ortho-phosphorus. Likens, etc. (24) found in the Hubbard Brook study that there was no strong correlation between cationic concentration and water discharge, in general, the loadings of cations were more strongly dependent on the volume of stream flow than on ionic concentrations. Therefore, their study indicated that the loadings of cations such as potassium, calcium, and

FIG. 2 SEASONAL LOADING RATE of METALS

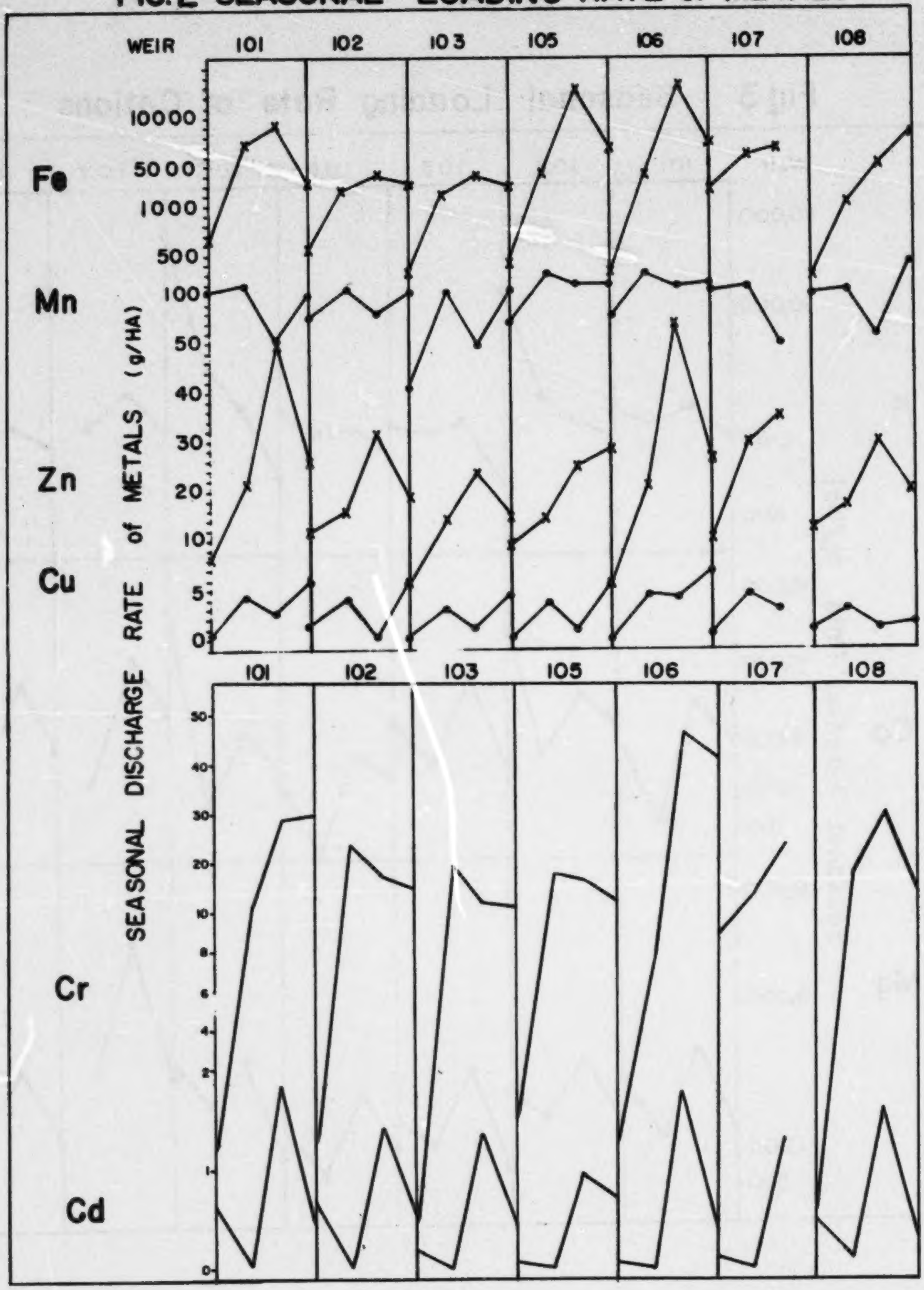
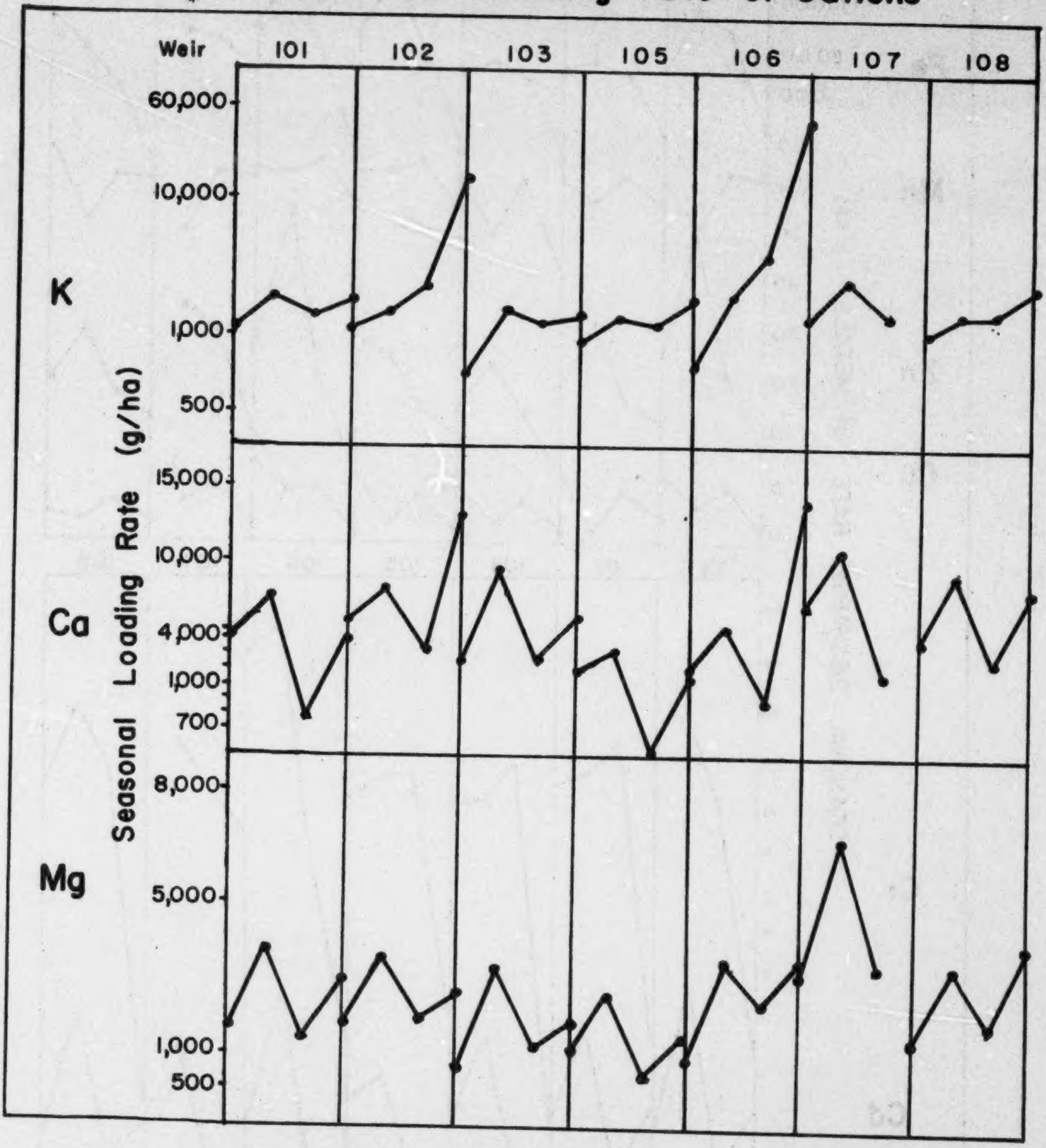


Fig. 3 Seasonal Loading Rate of Cations



magnesium are small during the summer periods of low stream flow, while the loading during the periods of high runoff such as in April and November are high.

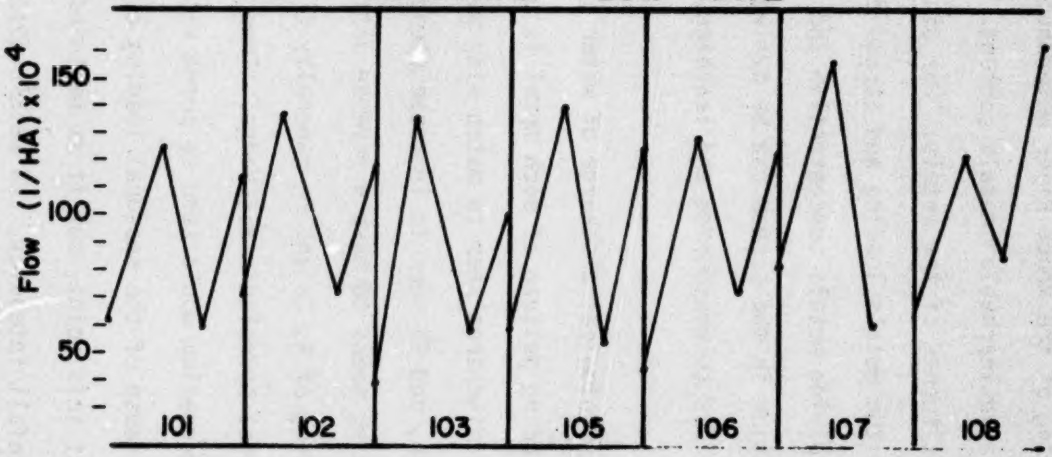
The metals loading of the Rhode River watershed is the loading obtained by determining the "acid leachable" metals content. This includes dissolved and particulate constituents of the metals. Our study showed a more complex relationship between the metals loading and stream discharge. Metals loading is obtained by multiplying metals concentration and the water discharge volume. The metals concentration in the stream can be derived from the precipitation input, from the soil due to weathering and leaching, or from man-made applications.

The seasonal hydrological discharge of water is reported in Figure 4. When the seasonal loading pattern of each metal is compared with the stream discharge, Mn and Cu discharge seem to match with water discharge, while loading of Cr, Fe, Zn, and Pb seem to increase steadily from winter to fall seasonally. Cd loading seems to have a reverse pattern from the water discharge. The loading of K, Ca and Mg generally fluctuate with the same pattern as the seasonal hydrologic discharge. Thus the loadings of potassium, calcium, and magnesium would tend to agree with the Hubbard Brook studies. The exact cause of the seasonal loading of Cr, Fe, Zn, Pb, and Cd is not clear to us at this point, but it is believed that the combination of metals input, rainfall intensity, and metals uptake into plants and binding to soil might be important factors.

Heavy Metal Sources

Many intensive chemical surveys of natural waters in the United States and other parts of the world continue to show that most heavy metals are

FIG 4 SEASONAL FLOW RATE



widely distributed. A review of the toxicology of metals and metalloids was provided by Thayer (25). The sources of heavy metals in the natural waters are derived from natural soil or from man-made pollution sources.

In order to determine the possibility of man-made contamination in the soil, rainfall, and in the water, the conventional technique of relative enrichment factor has been employed. The technique uses a reference element which is known or suspected to be of natural origin. Andren and Lindberg (32) used Mn as a reference element for their rainfall samples, Cs for dryfall deposits. Other elements such as Al (33), Ce, Eu, Lu, and Hf (34) and Cr (32) have also been used for soil and water, and Ce for rainfall and dryfall samples (27). Mn was chosen because it had the least change between samples and because it had a higher concentration than other reference elements such as Cr.

Table 18 summarizes the average elemental ratios (relative to Mn) of the metals in the water, the rainfall, and the soil from the Rhode River watershed. Some values previously cited as from average river water and also elements in earth crust were calculated and included in Table 18 for comparison purposes. It would seem that the metals in the Rhode River drainage streams that are derived from watershed soil include Fe, Mn, Cr, and possibly Cu, while Zn, Pb, and Cd in the stream channels; and Zn, Pb, Cu, Cd, and Cr in rain are enriched relative to that of soil from the Rhode River watershed. These elements might be of anthropogenic origin.

The enrichment of heavy metals in the forest detritus is worthy of noting, since the forest detritus might act as a trap for heavy metals. This finding supports the work of Fulkerson, Shults, and Van Hook (24) in which high levels of Ca, Cu, Pb and Zn were found in the organic litter of Crooked Creek watershed.

Table 18. Yearly average elemental ratios (relative to Mn) in the Rhode River watershed.

	Fe	Mn	Zn	Cr	Cd	Cu	Pb
101	43.55	1	0.300	0.173	0.0094	0.0264	0.1200
102	22.63	1	0.205	0.127	0.0069	0.0178	0.1000
103	27.38	1	0.199	0.122	0.0085	0.0215	0.1097
105	30.98	1	0.219	0.119	0.0068	0.0183	0.0665
106	31.90	1	0.176	0.146	0.0052	0.0213	0.0877
107	70.21	1	0.442	0.220	0.0138	0.0292	0.2374
108	30.52	1	0.193	0.143	0.0075	0.0144	0.1040
Watershed Mean	36.75	1	0.248	0.155	0.0083	0.0213	0.1179
Rain	23.86	1	53.14	0.857	0.4977	1.0447	1.0818
Det.	294	1	4.7	0.46	0.1	2.4	1.7
Soil	52.27	1	0.0804	0.0729	0.002[1]	0.0169	0.0340[2]
Ave. River (20)	1.5	1	2	0.2	—	1	0.6
Earth Crust (20)	58	1	0.07	0.11	0.0002	0.06	0.01

*Calculated from values given in Table 2

[1] Top layer of soil only

[2] Top two layers of soil only

Metals Area Yield

The yearly metals area yield is reported in Table 16 of the metals loading section. The area yield for different metals may vary as much as 10^4 fold. The area yield of each metal also varies for each basin but generally the difference is not more than 3 fold, with the exception of potassium which showed higher variation among the watershed basins.

The sizes of these seven basins varies from 28.2 hectares for weir 107 to 253.6 hectares for weir 103 (1). The land utilization type within each drainage basin varied from Steinlein Branch (weir 108) which had about 41% cultivated land, to that of Williamson Branch (weir 103) which had 74% forest. The metals area yield seems to vary from basin to basin, although the extent of variation is different for each metal. The area yield probably varied primarily due to different land uses. The seasonal area yield of the seven watershed basins for the eleven metals studied is reported in Table 19. In order to determine the area yield from each major land utilization type, a statistical model that was used for other parameters of the Rhode River watershed study was tested for metals.

It is known that metals area yields depend on such factors as amount of rainfall and its intensity, land use and agricultural practice, the metals concentration in rainfall, the slope of the land surface, the texture of the soil, the soil moisture, the soil pH, the rainfall pH, etc. However, if we assume that the meterological factors are equal for each basin within the Rhode River watershed and that soil texture and soil environment does not vary greatly from one basin to another within the Rhode River watershed; and if we assume that changes such as the following are controlled primarily by the land utilization type, (1) canopy interception of rainfall (which

Table 19. Seasonal stream output of metals from Rhode River watershed (g/ha)

	101	102	103	105	106	107	108
Fe							
Winter	596	536	357	419	353	2775	274
Spring	7282	2434	2432	3054	4189	6109	1552
Summer	9135	3869	3800	3943	13295	6875	5355
Fall	3200	3314	3080	4019	7160	—	8518
Mn							
Winter	119	80	41	71	77	125	100
Spring	183	164	122	195	299	194	120
Summer	52	80	49	35	190	49	58
Fall	110	134	133	184	200	—	438
Zn							
Winter	7.95	11.83	5.54	9.15*	5.58*	10.46	12.39
Spring	21.56	15.73	14.38	14.88	21.50	29.46	17.06
Summer	51.02	31.79	23.42	25.58	69.83	35.74	29.87
Fall	24.07	18.77	15.19	28.15	26.92	—	20.02
Cr							
Winter	1.16	1.33	0.43	1.47*	1.33*	8.87	0.59
Spring	10.50	23.44	19.53	17.53	7.93	13.89	17.59
Summer	28.12	17.04	11.82	16.13	46.43	23.72	30.35
Fall	29.30	14.35	10.80	12.61	41.26	—	14.74
Cd							
Winter	0.59	0.67	0.18	.08*	.05*	0.11	0.49
Spring	0	0	0	0	0	0	0.10
Summer	1.84	1.40	1.35	0.96	1.84	1.29	1.61
Fall	0.40	0.48	0.39	0.70	0.34	—	0.33

Table 19. Continued.

	101	102	103	105	106	107	108
Cu							
Winter	0.23	1.44	0.22	0.26*	0.08*	0.65	1.05
Spring	4.50	4.12	3.19	3.88	4.43	4.58	3.08
Summer	2.69	0.44	1.15	1.05	4.32	2.95	1.06
Fall	5.73	5.79	4.59	5.68	6.98	—	1.46
Pb							
Winter	0*	0*	0*	0*	0*	0*	0*
Spring	0	0	0	0	0	0	0
Summer	3.43	2.74	5.89	1.96	10.95	14.47	8.42
Fall	46.00	44.51	42.07	44.61	40.56	—	66.16
Ca							
Winter	4340	5378	2677	2014*	2340*	5902	3789
Spring	6805	8157	9744	3362	4653	11830	9407
Summer	751	3688	2055	434	882	1605	2006
Fall	3904	13132	5050	1850	13817	--	7298
Mg							
Winter	1772	1822	839	1077*	939*	3032	1374
Spring	3953	3672	3366	2648	3508	6721	3344
Summer	1501	1903	1284	777	2392	3308	1872
Fall	3098	2751	1932	1412	3501	--	4096
K							
Winter	1514	1632	734	993*	744*	2514	1162
Spring	3191	2963	2576	2361	3346	4808	2186
Summer	2324	4413	1626	1336	6260	2344	2638
Fall	3350	11948	2160	3150	57718	--	4367

*December data was not included.

--Weir was broken.

will change the metals concentration and physical impact on the soil), (2) shade condition of land (which will change soil temperature and soil moisture under similar weather conditions), and (3) absorption and uptake of metals that are different for different plant types; then the only important factors affecting metals discharge are slope and land utilization type of each basin. The average slope of each basin varies from 3.4% for Steinlein (weir 108) to 9.1% for North Sellman (weir 105). It is believed that while the slope of land may have some effects on metals discharge, the most important factor affecting the differential rate of metals discharge might be that of land utilization type.

Assuming that land utilization is the only important factor, metals discharge can be used to calculate area yield loading rates for each major land utilization type with a statistical model (9,30). The seasonal area yield loadings of the seven metals studied are reported in Table 20. The four seasons in 1975 are (1) Winter: December of 1974, January, February of 1975, (2) Spring: March, April and May, (3) Summer: June, July, August, (4) Fall: September, October, and November.

Cultivated lands seem to have the highest area yield loading of metals in the Fall season with the exception of Cu. The high area yield rate of Pb from cultivated land in Fall, and from pasture land in summer should be noted. Gasoline consumption is generally believed to be linked with Pb input and discharge. Pasture seems to have the highest area yield rate of all of the seven metals in summer: The 1975 rainfall record of the Rhode River showed that rainfall was highest in the summer of 1975. In comparison with the other land use types (forest and cropland), in the summer season, pasture probably has the least capacity to retain rainwater and its metals

Table 20. 1975 Mean seasonal area yield loading rates of three land use categories on the Rhode River watershed (g/ha - season).

	Fe	Mn	Zn	Cd	Cr	Cu	Pb	K	Ca	Mg
WINTER										
Cultivated	-67	250	27	0.55	-0.92	1.99	0	1309	4849	1129
Pasture	388	30	4.6	-0.11	2.72	-0.77	0	185	2056	477
Forest	447	31	5.5	0.04	0.09	0.14	0	602	1239	607
SPRING										
Cultivated	-4930	46	15	0	45	2.3	0	949	18780	4004
Pasture	6840	290	29	0	-16	5.4	0	4440	5735	4135
Forest	3440	147	14	0	16	3.7	0	2313	1429	2434
SUMMER										
Cultivated	950	68	-27	1.0	51	-3.8	-7.6	5904	5580	2621
Pasture	14700	163	10	3.8	39	3.0	15.3	6815	920	4549
Forest	3200	23	6	0.8	6	1.6	2.8	269	-316	335
FALL										
Cultivated	7520	325	33	0.33	20	-1.8	166	14030	8402	5247
Pasture	4200	33	28	-0.02	54	11.9	21	4698	20020	8147
Forest	2700	141	15	0.57	4	6.6	39	587	-1247	131

constituents. Therefore, metals are discharged from pasture land without too much delay. Forest showed the least variation of area yield loading during the four seasons. The area yield loading rate of potassium, calcium and magnesium showed that cultivated and pasture land discharged at higher rates than forest in fall and summer seasons. The highest calcium area yield loading occurred in spring for cultivated lands. The highest potassium area yield loading is from the cultivated land in fall.

A criticism of this application of a simple statistical model is the fact that perturbation factors such as land slope and associated rainfall impact etc. are often significant, and that the negative values in Table 20 can not be easily explained, although "sink" has been frequently used for such values.

"Field size" area yield from a single land type can be used to generate the area yield of that land use, even though the area yield of the field may be only useful for a particulate setting. This will be tested in our future research efforts.

Metals Transport

The water movement in the stream channel is the major vehicle that carrys the man-made toxic chemicals into coastal rivers and eventually into the marine environment. Runoff from forests, agricultural lands, and urban areas has been shown to contain sediments, organic materials, nutrients, metals and other pollutants (27, 28, 29).

A recent study of sediment cores from Chesapeake Bay was made by Sommer etc. (26). Surface enrichment of heavy metals such as Pb, Cu, Co, Ni and V was indicated in the sediment cores. The heavy metal concentration in the top 5 cm bottom sediments of the Rhode River was reported by Fraizer (30). The mean concentration of seven replicate samples from a station near the upper reach of Rhode River (RR 5.3 Km) were reported as: Mn 44 ug/g, Cu 6.4 ug/g, Zn 71 ug/g, Fe 18,500 ug/g, Cd 1.3 ug/g, Pb 12 ug/g, Ni 11 ug/g, and Cr 32 ug/g. The metals transport from the terrestrial environment to the ocean has recently received increasing attention (18, 19, 20).

Metals are transported in the stream channels in many different forms. It is important to know the transport mechanism of these metals, in order to understand their geochemical cycling in the environment. Generally metals in the river are studied in two different phases, dissolved and particulate. The metals in particulates can be those adsorbed by minerals, complexed with organics or existing as metalic solid compounds.

The forms of heavy metals in the transport process depend on the metal characteristics, the organic and inorganic constituents of the dissolved phase, and the nature of the suspended solids.

Gibbs (20) studied the transport of Fe, Ni, Cu, Cr, Co and Mn in the Amazon and Yukon Rivers. Attempts were made to fractionate metals transported in rivers into: (1) metals in solution, (2) metals adsorbed in minerals, (3) metals in solid organic material and (4) metals which exist as metallic coatings and (5) metals as detrital crystalline material. The forms of metals will determine their availability in nature. Only a very small fraction (<3%) and Fe, Cu and Co were found in the dissolved form in the Amazon and Yukon Rivers. The dissolved Mn and Cr were found to be 17% and 11% respectively. However, the fractions of Cu, Pb and Zn associated with particulate matter (>0.45 um) in the offshore epilimnion of Lake Michigan were less than 10 percent of the total metal contents (15). A study of Var River and its estuary reported that 30~60% of the total zinc discharged from Var River is in the soluble fraction (17).

The correlation coefficients of monthly average concentration of suspended particles (mg/l) and the logarithm of the metals concentration in the stream channels of the Rhode River watershed were tested. Of the seven heavy metals tested, only iron showed a good correlation ($r = 0.78$ to 0.91) and Cr showed fair correlation ($r = 0.66$ to 0.76). This would seem to suggest that only Fe is transported primarily in particulate form during the discharge process in the Rhode River watershed basins. More data analysis is in progress using individual sample metals concentrations and the concentration of suspended particles from each weekly volume integrated water sample.

The transport mechanism of the runoff metals in the drainage channels can be looked upon by studing the relationship of metals concentration and stream flow. Johnson and Needham (21) showed a strong inverse relationship between the concentrations of Ca^{++}, Mg^{++} and $Na+$ and stream discharge in the mountain streams of California. Likens, Borman, Johnson and Pierce (22) studied the calcium, magnesium, potassium and sodium budget of Hubbard Brook watershed. Their results indicated a constant cation concentration for all of the four ions studied, even though the flow rate in the stream channel changed over four orders of magnitude. The study of Verry (31) of stream flow chemistry of upland - peatland watersheds in Minnesota found some interesting results. Sulfate, Na, and H were found not to be related to streamflow rate. Concentration of Fe, Ca, Mg, Mn and Zn were found to be inversely related to stream flow rate. Potassium was the only ion that was positively correlated with stream flow rate. This was attributed to the fact that K is easily leached from plant tissue.

The relationships of stream flow rate to the metals concentration in the streams of the Rhode River watersheds were tested. Metals concentration in stream channels were plotted against stream flow. The preliminary results on weir 101 and weir 102 indicated that the correlation between metals concentration and stream flow were generally not good. In weir 101, K concentration had a positive correlation while calcium showed an inverse correlation with stream flow. This is similar to the results obtained by Verry. However, the concentrations of Zn, Fe and Mg were found to be positively correlated with stream flow. More tests are in progress and will be reported later.

ACKNOWLEDGEMENT

I wish to thank Mike Hoopes, Bonnie Fox and Sharon Waddington for lab assistance and data analysis. Dr. Jack W. Pierce provided valuable research advice. Dr. David L. Correll reviewed this manuscript; the discussion with him was most helpful.

This research was supported by a grant from the program for Research Applied to National Needs of the National Science Foundation, and by a grant from Smithsonian Research Foundation. In a later part of the research and during the preparation of this manuscript, the author received financial support from the Smithsonian's Environmental Science Program and from the Environmental Protection Agency (Grant No. R804536-01).

REFERENCES

1. Correll, D. L. (in press) "An overview of the Rhode River watershed program." In: Symposium on Watershed Research in Eastern North America. Chesapeake Bay Center for Environmental Studies, Smithsonian Institution, Edgewater, Md., Feb. 28 - March 3, 1977, Smithsonian Publication.
2. Corps of Engineers. 1973. "Chesapeake Bay - existing conditions report."
3. Williamson, F. S. L. 1966. "Rhode River Estuary". Chesapeake Bay Center for Environmental Studies, Smithsonian Institution, Edgewater, Md.
4. Higman, Dan. 1973. In: Environmental monitoring and baseline data, David L. Correll (ed.)., Smithsonian Institution.
5. Gladstone Associates, 1971. Housing outlook 1980, Anne Arundel County. Gladstone Asso., Washington, D. C. pp. 1-2.
6. Lisk, D. T. 1971. Ecological aspects of metals. New York State Journal of Medicine. pp. 2541-55.
7. Daudoroff, P., and M. Katz. 1953. Critical review of literature on the toxicity of industrial wastes and their components of fish. Sewage and Ind. Wastes 25, pp. 802.
8. Warnick, S. L. and H. L. Bell. 1969. The accute toxicity of some heavy metals to different species of aquatic insects. J. Water Poll. Control Fed., 41, 280 C Feb.
9. Chirlin, G., and D. L. Correll. (in press) A linear approach to the calculation of area yield coefficients based on land use. Symposium on Watershed Research in Eastern North America. Chesapeake Bay Center for Environmental Studies, Smithsonian Institution, Edgewater, Md. Feb. 28 - March 3, 1977, Smithsonian Publication.

10. Fulkerson, W. 1974. Ecology and analysis of trace contaminants. Oak Ridge Lab., Oak Ridge, Tennessee.

11. Kopp, J. F. and R. C. Kroner. 1970. Trace metals in waters of the United States. Federal Water Pollution Control Administration, Cincinnati.

12. Andelman, J. B. 1973. The effect of water treatment and distribution on trace metal concentrations. In: Chemistry of Water Supply, Treatment and Distribution. A. J. Rubin (ed.), Ann Arbor Science, Ann Arbor, Michigan.

13. Shapiro, M. A., J. B. Andelman and P. V. Morgan. 1967. Intensive study of the water at critical points on the Monogahela, Allegany, and Ohio Rivers in the Pittsburg, Pennsylvania area. University of Pittsburgh.

14. Wu, T. L. 1975. Metals Analysis. In: Environmental Monitoring and Baseline Data. D. L. Correll (ed.).

15. Leland, H. V. and N. F. Shimp. 1974. Distribution of selected trace metals in Southern Lake Michigan and lower Green Bay. Water Resources Center Research Report No. 84, UILU - WRD - 74 - 0084, University of Illinois, Urbana - Champaign.

16. Cause, P. A. and D. H. Peirson. 1972. An analytical study of trace elements in the atmospheric environment. United Kingdom Atomic Energy Authority Research Report.

17. Fukai, R., C. N. Murray and L. Huynl-Ngoc. 1975. Variation of soluble zinc in the Var River and its estuary. Estuarine and Coastal Marine Science 3, pp. 177-188.

18. Nelson, D. J. 1970. Measurement and sampling of outputs from watersheds. Ecological Studies. Vol. 1, pp. 257-267.

19. Livingstone, D. A. 1963. Chemical composition of rivers and lakes. U. S. Geol. Surv. Prof. paper, 440-G.

20. Giggs, R. J. 1967. Amazon River, environmental factors that control its dissolved and suspended load. Science, 156, pp. 1734-1737.

21. Johnson, C. M. and P. R. Needham. 1966. Ionic composition of Sagehen Creek, California, following an adjacent fire. Ecology 41, pp. 636-639.

22. Likens, G. E., F. H. Borman, N. M. Johnson, and R. S. Pierce. Ecology, 48, pp. 772-785.

23. Turner, R. R., R. C. Harris, T. M. Burton and E. A. Laws. 1977. Mineral Cycling in Southeastern Ecosystems. U. S. A. E. C. Symposium Series.

24. Fulkerson, W., W. D. Shults, and R. L. Van Hook. 1976. Ecology and Analysis of Trace Contaminants, ORWL-NSF-EATC-11 Oak Ridge National Laboratory, Oak Ridge, Tennessee.

25. Thayer, J. S. 1974. Organometallic compounds and living organisms. J. Organometallic Chem. 76: 265.

26. Sommer, S. E. and A. J. Pyzik. 1974. Geochemistry of Middle Chesapeake Bay Sediments from Upper Cretaceous to present. Chesapeake Science 15. pp. 39.

27. Weidner, R. B. et. al. 1969. Rural runoff as a factor in stream pollution. J. Water Poll. Control Fed., 41, 377.

28. Edwards, C. A. 1974. Persistent pesticides in the environment. CRC Critical Reviews in Environmental Control.

29. Andren, A. W., S. E. Lindberg, and L. C. Bate. 1975. Atmospheric input and geochemical cycling of selected trace elements in Walker Branch Watershed. ORNL-NSF-EATC-13. Oak Ridge National Laboratory, Oak Ridge, Tennessee.

30. Fraizer, John. 1973. Trace Metals in Bottom Sediments. In Environmental Monitoring and Baseline Data. D. L. Correll (ed.).

31. Verry, E. S. (1975) Streamflow Chemistry and nutrient yields from upland-peatland watersheds in Minnesota. Ecology 56, pp. 1149-1156.

32. Andren, A. W., S. E. Lindberg, and L. C. Bate. 1975. "Atmospheric input and geochemical cycling of selected trace elements in Walker Branch Watershed." ORNL-NSF-EATC-13. Oak Ridge National Lab., Oak Ridge, Tennessee.

33. Zoller, W. H., E. S. Gladney and R. S. Duce. 1974. Atmospheric concentration and sources of trace metals at the South Pole. Science 183, 198-200.

34. Bolton, N. E., et. al. 1974. Trace element measurements at the coal-fired Allen Steam Plant. ORNL-NSF-EP-62. 43 pp.

35. Correll, D. L., J. W. Pierce, and M. A. Faust. (1975) A quantitative study of the nutrient, sediment, and coliform bacteria constituents of water runoff from the Rhode River watershed. Non-point source of Water Pollution Symposium Blacksburg, Va.

36. Correll, D. L. 1976. The relative contribution of point and non-point sources of nutrients and pathogens. In Water Quality Goals for Chesapeake Bay - What are they and how can they be achieved? Va. Polytechnic Institute and St. Univer., Blacksburg, Va., Publ. 706, pp. 19-31.

37. Chirlin, G. (in press) Non-point Source Studies on Chesapeake Bay, IV. Weekly Surface Hydrology of Seven Sub-basins within the Rhode River Watershed, Calendar Year 1974-1975-1976. CRC Publication No. 57.

38. Correll, D. L. (ed.) 1974. Environmental Monitoring and Baseline Data, Smithsonian Institution, Environmental Science Program.

39. Beck, K. E., J. H. Reuter and E. M. Perdue. 1973. Organic and inorganic geochemistry of some coastal plain rivers of the Southeastern United States. Geochimica et Cosmochimica Acta, 38, pp. 341-364.

40. Riley, J. P. and R. Chester. 1971. Introduction to Marine Chemistry. Academic Press, New York. p. 64.

41. Analytical Quality Control Laboratory. 1972. Handbook for Analytical Quality Control in Water and Waste Water Laboratories. National Environmental Research Center, Cincinnati, Ohio. page 6-3.

WEIR 101 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	1940	1.39000E+07	8.58787E+00
74 357 1000	74 364 0925	713	4.92000E+06	3.15626E+00
74 364 0925	75 006 1115	.	5.46000E+06	.
75 006 1115	75 013 1100	875	1.23000E+07	3.87340E+00
75 013 1100	75 020 1000	1450	1.84000E+07	6.41877E+00
75 020 1000	75 027 1105	247	1.65000E+07	1.09340E+00
75 027 1105	75 034 1145	499	1.18000E+07	2.20894E+00
75 034 1145	75 041 1240	985	2.04000E+07	4.36034E+00
75 041 1240	75 049 1340	485	1.67000E+07	2.14697E+00
75 049 1340	75 055 1205	864	1.02000E+07	3.82470E+00
75 055 1205	75 062 1225	1470	1.33000E+07	6.50730E+00
75 062 1225	75 069 1210	.	8.99000E+06	.
75 069 1210	75 076 1320	3440	3.25000E+07	1.52280E+01
75 076 1320	75 083 1345	19000	5.73000E+07	8.41080E+01
75 083 1340	75 090 1245	4140	3.10000E+07	1.83267E+01
75 090 1245	75 097 1215	1720	1.74000E+07	7.61399E+00
75 097 1215	75 104 1210	1200	1.25000E+07	5.31208E+00
75 104 1210	75 111 1205	817	1.70000E+07	3.61664E+00
75 111 1205	75 118 1205	1980	1.86000E+07	8.76494E+00
75 118 1205	75 125 1305	2740	3.08000E+07	1.21293E+01
75 125 1305	75 132 1135	2160	2.27000E+07	9.56175E+00
75 132 1135	75 139 1150	539	2.22000E+07	2.38601E+00
75 139 1150	75 147 1130	3170	1.18000E+07	1.40328E+01
75 147 1130	75 153 1355	5100	7.37000E+06	2.25764E+01
75 153 1355	75 160 1150	3080	6.23000E+06	1.36344E+01
75 160 1150	75 167 .	4670	5.45000E+06	2.06729E+01
75 167 .	75 174 1125	7490	6.64000E+06	3.31563E+01
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	37400	3.78000E+07	1.65560E+02
75 195 1220	75 202 1140	4170	2.82000E+07	1.84595E+01
75 202 1140	75 209 1205	4650	8.55000E+06	2.05843E+01
75 209 1205	75 216 1100	5370	4.55000E+06	2.37716E+01
75 216 1100	75 223 1130	6650	6.08000E+06	2.94378E+01
75 223 1130	75 230 1200	10200	1.34000E+07	4.51527E+01
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	4630	1.07000E+07	2.04958E+01
75 244 1020	75 251 1130	2860	9.93000E+06	1.26605E+01
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	11	5.27000E+06	4.95795E-02
75 265 1150	75 272 1200	5920	8.27000E+07	2.62063E+01
75 272 1200	75 280 0925	1100	1.84000E+07	4.86941E+00
75 280 0925	75 287 0920	1580	2.45000E+07	6.99425E+00
75 287 0920	75 293 0950	1270	2.20000E+07	5.62196E+00
75 293 0950	75 301 1040	1180	1.71000E+07	5.22355E+00

WEIR 101 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	925	1.12000E+07	4.09473E+00
75 307 1040	75 314 1330	1330	1.15000E+07	5.88756E+00
75 314 1330	75 321 0920	1950	2.55000E+07	8.63214E+00
75 321 0920	75 328 1150	644	1.34000E+07	2.85082E+00
75 328 1150	75 335 1145	650	1.07000E+07	2.87738E+00
WINTER 1975		733	1.60080E+08	4.21780E+01
SPRING 1975		3539	2.90160E+08	2.03656E+02
SUMMER 1975		6793	1.34624E+08	3.90925E+02
FALL 1975		1494	2.55920E+08	8.59681E+01
TOTAL 1975		3140	8.40784E+08	7.22728E+02

WEIR 102 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	1560	1.27000E+07	8.13347E+00
74 357 1020	74 364 1015	778	5.23000E+06	4.05631E+00
74 364 1025	75 006 1140	583	4.35000E+06	3.03962E+00
75 006 1140	75 013 1125	360	1.12000E+07	1.87696E+00
75 013 1125	75 020 1020	1570	1.78000E+07	8.18561E+00
75 020 1020	75 027 1135	450	1.78000E+07	2.34619E+00
75 027 1135	75 034 1205	177	1.05000E+07	9.22836E-01
75 034 1255	75 041 1300	482	1.92000E+07	2.51303E+00
75 041 1300	75 049 1350	860	1.54000E+07	4.48384E+00
75 049 1350	75 055 1220	140	9.00000E+06	7.29927E-01
75 055 1220	75 062 1240	930	1.16000E+07	4.84880E+00
75 062 1240	75 069 1415	407	6.64000E+06	2.12200E+00
75 069 1415	75 076 1330	1420	3.18000E+07	7.40355E+00
75 076 1330	75 083 1400	5000	6.04000E+07	2.60688E+01
75 083 1400	75 090 1300	1460	2.56000E+07	7.61210E+00
75 090 1300	75 097 1240	947	1.34000E+07	4.93743E+00
75 097 1240	75 104 1225	195	9.38000E+06	1.01668E+00
75 104 1225	75 111 1225	357	1.36000E+07	1.86131E+00
75 111 1225	75 118 1225	350	1.55000E+07	1.82482E+00
75 118 1225	75 125 1320	346	2.88000E+07	1.80396E+00
75 125 1320	75 132 1150	456	2.09000E+07	2.37748E+00
75 132 1150	75 139 1205	492	2.03000E+07	2.56517E+00
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	1240	5.75000E+06	6.46507E+00
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	11500	5.84000E+06	5.99583E+01
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	6740	4.92000E+07	3.51408E+01
75 195 1240	75 202 1200	5060	2.68000E+07	2.63816E+01
75 202 1200	75 209 1245	3220	6.30000E+06	1.67883E+01
75 209 1245	75 216 1115	1420	4.15000E+06	7.40355E+00
75 216 1115	75 223 1140	2200	3.90000E+06	1.14703E+01
75 223 1140	75 230 1220	6580	1.73000E+07	3.43066E+01
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	1710	7.60000E+06	8.91554E+00
75 251 1145	75 258 1200	1170	2.58000E+06	6.10010E+00
75 258 1200	75 265 1205	1450	3.69000E+06	7.55996E+00
75 265 1205	75 272 1230	4260	9.24000E+07	2.22106E+01
75 272 1230	75 280 0940	1540	1.26000E+07	8.02920E+00
75 280 0940	75 287 0940	1630	1.89000E+07	8.49844E+00
75 287 0940	75 293 1010	1380	1.68000E+07	7.19499E+00
75 293 1010	75 301 1055	2310	1.26000E+07	1.20438E+01

WEIR 102 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	1540	8.76000E+06	8.02920E+00
75 307 1050	75 314 1345	1100	7.61000E+06	5.73514E+00
75 314 1345	75 321 0940	2500	2.33000E+07	1.30344E+01
75 321 0940	75 328 1205	1900	1.09000E+07	9.90615E+00
75 328 1205	75 335 1200	2160	8.14000E+06	1.12617E+01
WINTER 1975		607	1.49280E+08	4.11366E+01
SPRING 1975		975	2.60980E+08	6.60584E+01
SUMMER 1975		2825	1.35380E+08	1.91449E+02
FALL 1975		1896	2.25880E+08	1.28519E+02
TOTAL 1975		1576	7.71520E+08	4.27164E+02

WEIR 103 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	907	8.10000E+06	3.57650E+00
74 357 1050	74 364 1040	259	2.80000E+06	1.02129E+00
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	627	1.02000E+07	2.47240E+00
75 013 1200	75 020 1040	1710	1.71000E+07	6.74290E+00
75 020 1040	75 027 1155	680	1.65000E+07	2.68139E+00
75 027 1155	75 034 1400	309	9.57000E+06	1.21845E+00
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	1030	1.64000E+07	4.06151E+00
75 049 1600	75 055 1425	1510	1.01000E+07	5.95426E+00
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	324	8.10000E+06	1.27760E+00
75 069 1355	75 076 1600	2470	3.77000E+07	9.73975E+00
75 076 1600	75 083 1545	4160	6.80000E+07	1.64038E+01
75 083 1545	75 090 1350	2160	3.23000E+07	8.51735E+00
75 090 1350	75 097 1540	559	1.87000E+07	2.20426E+00
75 097 1540	75 104 1540	106	1.34000E+07	4.17981E-01
75 104 1540	75 111 1555	195	1.92000E+07	7.68927E-01
75 111 1555	75 118 1540	391	2.29000E+07	1.54180E+00
75 118 1540	75 125 1615	577	3.86000E+07	2.27524E+00
75 125 1615	75 132 1610	1670	3.02000E+07	6.58517E+00
75 132 1610	75 139 1515	545	2.99000E+07	2.14905E+00
75 139 1515	75 147 .	1420	1.48000E+07	5.59937E+00
75 147 1435	75 153 1705	3250	1.01000E+07	1.28155E+01
75 153 1705	75 160 1540	1840	7.29000E+06	7.25552E+00
75 160 1540	75 167 1505	6970	6.65000E+06	2.74842E+01
75 167 1505	75 174 1245	16700	1.25000E+07	6.58517E+01
75 174 1245	75 181 .	3330	2.13000E+06	1.31309E+01
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	11100	4.75000E+07	4.37697E+01
75 195 1600	75 202 1515	1770	2.91000E+07	6.97950E+00
75 202 1515	75 209 1400	1530	7.22000E+06	6.03312E+00
75 209 1400	75 216 .	2160	3.15000E+06	8.51735E+00
75 216 .	75 223 1450	7260	4.09000E+06	2.86278E+01
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	1490	7.61000E+06	5.87539E+00
75 239 1040	75 244 1220	5730	5.51000E+06	2.25946E+01
75 244 1220	75 251 1415	717	4.30000E+06	2.82729E+00
75 251 1500	75 258 1500	1430	2.32000E+06	5.63880E+00
75 258 1500	75 265 1500	1680	3.03000E+06	6.62461E+00
75 265 1500	75 272 1445	6690	8.88000E+07	2.63801E+01
75 272 1445	75 280 1220	1130	1.65000E+07	4.45584E+00
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	872	1.28000E+07	3.43849E+00
75 328 1600	75 335 1555	746	1.23000E+07	2.94164E+00
WINTER 1975		879	1.37330E+08	2.77287E+01
SPRING 1975		1371	3.43900E+08	7.02957E+01
SUMMER 1975		5444	1.44642E+08	2.36120E+02
FALL 1975		1895	2.53650E+08	5.23068E+01
TOTAL 1975		2513	8.79522E+08	3.86451E+02

WEIR 105 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	1580	2.15000E+06	4.21333E+01
75 013 1500	75 020 1150	855	3.43000E+06	2.28000E+01
75 020 1140	75 027 1320	509	3.41000E+06	1.35733E+01
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	442	3.92000E+06	1.17867E+01
75 041 1130	75 049 1100	360	2.94000E+06	9.60000E+00
75 049 1100	75 055 1100	625	1.74000E+06	1.66667E+01
75 055 1100	75 062 1120	1280	2.33000E+06	3.41333E+01
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	1540	6.44000E+06	4.10667E+01
75 076 1150	75 083 1220	6070	1.22000E+07	1.61867E+02
75 083 1220	75 090 1110	1600	5.53000E+06	4.26667E+01
75 090 1110	75 097 1110	674	2.83000E+06	1.79733E+01
75 097 1110	75 104 1105	182	1.82000E+06	4.85333E+00
75 104 1105	75 111 1050	281	2.65000E+06	7.49333E+00
75 111 1050	75 118 1100	585	3.19000E+06	1.56000E+01
75 118 1100	75 125 1130	384	5.68000E+06	1.02400E+01
75 125 1130	75 132 1040	542	3.77000E+06	1.44533E+01
75 132 1040	75 139 1040	672	4.08000E+06	1.79200E+01
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	6980	1.08000E+06	1.86133E+02
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	9530	2.88000E+05	2.54133E+02
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	11800	8.64000E+06	3.14667E+02
75 195 1040	75 202 1030	2650	4.77000E+06	7.06667E+01
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	13600	1.50000E+06	3.62667E+02
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	5190	2.27000E+07	1.38400E+02
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	1580	3.89000E+06	4.21333E+01
75 287 0850	75 293 0850	1900	4.64000E+06	5.06667E+01
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		807	2.18300E+07	1.50693E+02
SPRING 1975		1774	5.24300E+07	5.20267E+02
SUMMER 1975		9395	2.01269E+07	1.00213E+03
FALL 1975		2890	4.65736E+07	2.31200E+02
TOTAL 1975		2856	1.40961E+08	1.90429E+03

WEIR 106 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	1310	5.19000E+06	1.37461E+01
75 013 1520	75 020 1150	919	5.79000E+06	9.64323E+00
75 020 1150	75 027 1340	722	6.34000E+06	7.57608E+00
75 027 1340	75 034 1050	402	4.30000E+06	4.21826E+00
75 034 1050	75 041 1145	1130	6.39000E+06	1.18573E+01
75 041 1145	75 049 1120	468	6.28000E+06	4.91081E+00
75 049 1120	75 055 1120	539	3.69000E+06	5.65582E+00
75 055 1120	75 062 1135	652	4.76000E+06	6.84155E+00
75 062 1135	75 069 1120	1050	2.68000E+06	1.10178E+01
75 069 1120	75 076 1205	3490	1.37000E+07	3.66212E+01
75 076 1205	75 083 1240	6380	2.61000E+07	6.69465E+01
75 083 1240	75 090 1130	1210	1.09000E+07	1.26967E+01
75 090 1130	75 097 1125	1380	6.59000E+06	1.44806E+01
75 097 1125	75 104 1125	163	5.47000E+06	1.71039E+00
75 104 1125	75 111 1105	434	7.82000E+06	4.55404E+00
75 111 1105	75 118 1110	751	1.09000E+07	7.88038E+00
75 118 1110	75 125 1150	760	1.77000E+07	7.97482E+00
75 125 1150	75 132 1055	626	8.35000E+06	6.56873E+00
75 132 1055	75 139 1100	1950	8.81000E+06	2.04617E+01
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	10100	2.79000E+06	1.05981E+02
75 153 1045	75 160 1055	5410	4.53000E+06	5.67681E+01
75 160 1055	75 167 1030	6190	4.32000E+06	6.49528E+01
75 167 1030	75 174 1020	12000	3.81000E+06	1.25918E+02
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	39400	2.37000E+07	4.13431E+02
75 195 1050	75 202 .	5220	1.14000E+07	5.47744E+01
75 202 .	75 209 1145	2570	2.58000E+06	2.69675E+01
75 209 1145	75 216 1020	15600	1.71000E+06	1.63694E+02
75 216 1020	75 223 1055	8110	1.37000E+06	8.50997E+01
75 223 1055	75 230 1130	18700	5.59000E+06	1.96222E+02
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	2420	2.62000E+06	2.53935E+01
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	1690	1.72000E+06	1.77335E+01
75 265 1100	75 272 1040	10700	5.13000E+07	1.12277E+02
75 272 1040	75 280 0850	1270	6.10000E+06	1.33263E+01
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	2990	1.01000E+07	3.13746E+01
75 293 0900	75 301 1005	1730	6.64000E+06	1.81532E+01
75 301 1005	75 307 0850	1910	4.20000E+06	2.00420E+01
75 307 0850	75 314 1250	2740	4.12000E+06	2.87513E+01
75 314 1250	75 321 1155	3190	1.06000E+07	3.34732E+01
75 321 1155	75 328 1040	1420	4.86000E+06	1.49003E+01
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		768	4.27400E+07	6.44491E+01
SPRING 1975		2358	1.25340E+08	2.96894E+02
SUMMER 1975		12578	6.73110E+07	1.18783E+03
FALL 1975		3006	1.15510E+08	3.15425E+02
TOTAL 1975		4556	3.50901E+08	1.86460E+03

WEIR 107 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	1750	1.08000E+06	6.20567E+01
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	8890	2.58000E+06	3.15248E+02
75 013 1600	75 021 1220	2790	2.94000E+06	9.89362E+01
75 021 1220	75 027 1020	2740	2.34000E+06	9.71631E+01
75 027 1020	75 034 0955	747	1.80000E+06	2.64894E+01
75 034 0955	75 041 1030	2220	4.05000E+06	7.87234E+01
75 041 1030	75 049 1025	3190	3.04000E+06	1.13121E+02
75 049 1025	75 055 1020	4070	1.74000E+06	1.44326E+02
75 055 1020	75 062 1040	4730	2.43000E+06	1.67730E+02
75 062 1040	75 069 1000	615	1.45000E+06	2.18085E+01
75 069 1120	75 076 1045	9370	6.52000E+06	3.32270E+02
75 076 1045	75 083 1110	1490	7.84000E+06	5.28369E+01
75 083 1110	75 090 1030	2950	4.25000E+06	1.04610E+02
75 090 1030	75 097 1025	1220	3.49000E+06	4.32624E+01
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	2740	2.28000E+06	9.71631E+01
75 111 1015	75 118 1005	5240	2.40000E+06	1.85816E+02
75 118 1005	75 125 1045	5020	4.05000E+06	1.78014E+02
75 125 1045	75 132 1000	3490	2.93000E+06	1.23759E+02
75 132 1000	75 139 0950	2610	3.73000E+06	9.25532E+01
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	18300	1.15000E+06	6.48936E+02
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	638	9.51000E+05	2.26241E+01
75 167 0935	75 174 1107	77700	9.19000E+05	2.75532E+03
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	14800	4.22000E+06	5.24823E+02
75 195 0955	75 202 1000	8620	3.68000E+06	3.05674E+02
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	29100	8.28000E+05	1.03191E+03
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	7040	.	2.49645E+02

WEIR 107 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		2394	1.27194E+07	1.10379E+03
SPRING 1975		4080	4.37500E+07	1.88102E+03
SUMMER 1975		10066	1.65460E+07	4.64035E+03
FALL 1975		1760	1.24900E+06	2.49645E+02
TOTAL 1975		5164	7.42644E+07	7.87480E+03

WEIR 108 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.500[illegible]0E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	2140	8.92000E+06	1.42287E+01
74 357 1120	74 364 1110	259	2.57000E+06	1.72207E+00
74 364 1110	75 006 1315	414	3.18000E+06	2.75266E+00
75 006 1315	75 013 1245	533	6.23000E+06	3.54388E+00
75 013 1245	75 020 1110	865	1.15000E+07	5.75133E+00
75 020 1110	75 027 1240	450	1.05000E+07	2.99202E+00
75 027 1240	75 034 1340	305	6.94000E+06	2.02793E+00
75 034 1340	75 041 1340	326	1.27000E+07	2.16755E+00
75 041 1340	75 049 1455	420	1.06000E+07	2.79255E+00
75 049 1455	75 055 1345	349	6.55000E+06	2.32048E+00
75 055 1345	75 062 1340	501	8.26000E+06	3.33112E+00
75 062 1340	75 069 1230	499	5.57000E+06	3.31782E+00
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	2200	3.64000E+07	1.46277E+01
75 083 1500	75 090 1405	1030	2.49000E+07	6.84840E+00
75 090 1405	75 097 1510	789	1.12000E+07	5.24601E+00
75 097 1510	75 104 1525	146	8.94000E+06	9.70745E-01
75 104 1525	75 111 1530	207	1.20000E+07	1.37633E+00
75 111 1530	75 118 1500	512	1.22000E+07	3.40426E+00
75 118 1500	75 125 1545	644	2.28000E+07	4.28191E+00
75 125 1545	75 132 1545	1760	1.93000E+07	1.17021E+01
75 132 1545	75 139 1440	678	1.19000E+07	4.50798E+00
75 139 1440	75 147 1415	1240	9.20000E+06	8.24468E+00
75 147 1415	75 153 1630	3820	9.92000E+06	2.53989E+01
75 153 1630	75 160 1510	4490	6.59000E+06	2.98537E+01
75 160 1510	75 167 1400	5670	6.61000E+06	3.76995E+01
75 167 1400	75 174 1300	12300	4.48000E+06	8.17819E+01
75 174 1300	75 181 .	7410	1.95000E+06	4.92686E+01
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	9340	4.57000E+07	6.21011E+01
75 195 1515	75 202 1440	2810	2.51000E+07	1.86835E+01
75 202 1440	75 209 1330	2190	6.67000E+06	1.45612E+01
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	3840	6.27000E+06	2.55319E+01
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	4100	1.56000E+06	2.72606E+01
75 237 1345	75 244 1155	7950	9.72000E+06	5.28590E+01
75 244 1155	75 251 1325	2240	4.44000E+06	1.48936E+01
75 251 1325	75 258 1445	2540	1.63000E+06	1.68883E+01
75 258 1445	75 265 1440	1920	3.49000E+06	1.27660E+01
75 265 1440	75 272 1415	4060	1.14000E+08	2.69947E+01
75 272 1415	75 280 1150	1390	1.32000E+07	9.24202E+00
75 280 1150	75 287 1220	6410	2.13000E+07	4.26197E+01
75 287 1220	75 293 1145	6620	1.72000E+07	4.40160E+01
75 293 1145	75 301 1210	23400	1.32000E+07	1.55585E+02

WEIR 108 1975 TOTAL IRON
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	2170	8.68000E+06	1.44282E+01
75 307 1320	75 314 1545	2670	8.49000E+06	1.77527E+01
75 314 1545	75 322 1255	6950	2.23000E+07	4.62101E+01
75 322 1255	75 328 1540	1550	8.63000E+06	1.03059E+01
75 328 1540	75 335 1520	1240	8.23000E+06	8.24468E+00
WINTER 1975		597	1.01520E+08	4.36303E+01
SPRING 1975		1127	2.28430E+08	8.99269E+01
SUMMER 1975		6010	1.26513E+08	3.99601E+02
FALL 1975		4858	2.44790E+08	4.19947E+02
TOTAL 1975		3116	7.01253E+08	9.53105E+02

WEIR 101 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	227	1.39000E+07	1.00487E+00
74 357 1000	74 364 0925	21	4.92000E+06	9.11908E-02
74 364 0925	75 006 1115	186	5.46000E+06	8.23373E-01
75 006 1115	75 013 1100	186	1.23000E+07	8.23373E-01
75 013 1100	75 020 1000	198	1.84000E+07	8.76494E-01
75 020 1000	75 027 1105	152	1.65000E+07	6.72864E-01
75 027 1105	75 034 1145	44	1.18000E+07	1.93891E-01
75 034 1145	75 041 1240	35	2.04000E+07	1.54493E-01
75 041 1240	75 049 1340	69	1.67000E+07	3.06330E-01
75 049 1340	75 055 1205	143	1.02000E+07	6.33023E-01
75 055 1205	75 062 1225	333	1.33000E+07	1.47410E+00
75 062 1225	75 069 1210	.	8.99000E+06	.
75 069 1210	75 076 1320	163	3.25000E+07	7.21558E-01
75 076 1320	75 083 1345	274	5.73000E+07	1.21293E+00
75 083 1340	75 090 1245	106	3.10000E+07	4.69234E-01
75 090 1245	75 097 1215	103	1.74000E+07	4.55954E-01
75 097 1215	75 104 1210	56	1.25000E+07	2.47012E-01
75 104 1210	75 111 1205	93	1.70000E+07	4.11687E-01
75 111 1205	75 118 1205	105	1.86000E+07	4.64807E-01
75 118 1205	75 125 1305	92	3.08000E+07	4.06375E-01
75 125 1305	75 132 1135	95	2.27000E+07	4.22753E-01
75 132 1135	75 139 1150	37	2.22000E+07	1.65117E-01
75 139 1150	75 147 1130	227	1.18000E+07	1.00487E+00
75 147 1130	75 153 1355	355	7.37000E+06	1.57149E+00
75 153 1355	75 160 1150	183	6.23000E+06	8.10093E-01
75 160 1150	75 167 .	89	5.45000E+06	3.92209E-01
75 167 .	75 174 1125	54	6.64000E+06	2.40372E-01
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	103	3.78000E+07	4.55954E-01
75 195 1220	75 202 1140	49	2.82000E+07	2.15582E-01
75 202 1140	75 209 1205	109	8.55000E+06	4.82514E-01
75 209 1205	75 216 1100	48	4.55000E+06	2.11598E-01
75 216 1100	75 223 1130	47	6.08000E+06	2.06286E-01
75 223 1130	75 230 1200	68	1.34000E+07	3.00575E-01
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	161	1.07000E+07	7.12705E-01
75 244 1020	75 251 1130	131	9.93000E+06	5.79903E-01
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	2	5.27000E+06	1.06684E-02
75 265 1150	75 272 1200	132	8.27000E+07	5.84329E-01
75 272 1200	75 280 0925	75	1.84000E+07	3.32005E-01
75 280 0925	75 287 0920	110	2.45000E+07	4.86941E-01
75 287 0920	75 293 0950	86	2.20000E+07	3.82913E-01
75 293 0950	75 301 1040	87	1.71000E+07	3.84683E-01

WEIR 101 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	67	1.12000E+07	2.97919E-01
75 307 1040	75 314 1330	65	1.15000E+07	2.89951E-01
75 314 1330	75 321 0920	109	2.55000E+07	4.82514E-01
75 321 0920	75 328 1150	56	1.34000E+07	2.46569E-01
75 328 1150	75 335 1145	34	1.07000E+07	1.52722E-01
WINTER 1975		123	1.60080E+08	7.05401E+00
SPRING 1975		131	2.90160E+08	7.55378E+00
SUMMER 1975		70	1.34624E+08	4.02789E+00
FALL 1975		74	2.55920E+08	4.23112E+00
TOTAL 1975		99	8.40784E+08	2.28668E+01

WEIR 102 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	145	1.27000E+07	9.60115E+06
74 357 1020	74 364 1015	165	5.23000E+06	4.49922E+06
74 364 1025	75 006 1140	227	4.35000E+06	5.14833E+06
75 006 1140	75 013 1125	76	1.12000E+07	4.46131E+06
75 013 1125	75 020 1020	167	1.78000E+07	1.54984E+07
75 020 1020	75 027 1135	165	1.78000E+07	1.53128E+07
75 027 1135	75 034 1205	40	1.05000E+07	2.20073E+06
75 034 1255	75 041 1300	145	1.92000E+07	1.45151E+07
75 041 1300	75 049 1350	0	1.54000E+07	0.00000E+00
75 049 1350	75 055 1220	76	9.00000E+06	3.58498E+06
75 055 1220	75 062 1240	82	1.16000E+07	4.97143E+06
75 062 1240	75 069 1415	85	6.64000E+06	2.93919E+06
75 069 1415	75 076 1330	130	3.18000E+07	2.15537E+07
75 076 1330	75 083 1400	137	6.04000E+07	4.31429E+07
75 083 1400	75 090 1300	88	2.56000E+07	1.17322E+07
75 090 1300	75 097 1240	192	1.34000E+07	1.34140E+07
75 097 1240	75 104 1225	87	9.38000E+06	4.24496E+06
75 104 1225	75 111 1225	71	1.36000E+07	5.06986E+06
75 111 1225	75 118 1225	12	1.55000E+07	9.37435E+05
75 118 1225	75 125 1320	80	2.88000E+07	1.20275E+07
75 125 1320	75 132 1150	124	2.09000E+07	1.35120E+07
75 132 1150	75 139 1205	65	2.03000E+07	6.93248E+06
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	326	5.75000E+06	9.77320E+06
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	153	5.84000E+06	4.65860E+06
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	100	4.92000E+07	2.56517E+07
75 195 1240	75 202 1200	57	2.68000E+07	7.97852E+06
75 202 1200	75 209 1245	52	6.30000E+06	1.71131E+06
75 209 1245	75 216 1115	120	4.15000E+06	2.59645E+06
75 216 1115	75 223 1140	72	3.90000E+06	1.46199E+06
75 223 1140	75 230 1220	51	1.73000E+07	4.61814E+06
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	2	7.60000E+06	9.31178E+04
75 251 1145	75 258 1200	2	2.58000E+06	2.93243E+04
75 258 1200	75 265 1205	2	3.69000E+06	4.63655E+04
75 265 1205	75 272 1230	138	9.24000E+07	6.64818E+07
75 272 1230	75 280 0940	86	1.26000E+07	5.64964E+06
75 280 0940	75 287 0940	96	1.89000E+07	9.44015E+06
75 287 0940	75 293 1010	94	1.68000E+07	8.22482E+06
75 293 1010	75 301 1055	136	1.26000E+07	8.93431E+06

WEIR 102 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	118	8.76000E+06	5.38936E+06
75 307 1050	75 314 1345	95	7.61000E+06	3.77326E+06
75 314 1345	75 321 0940	140	2.33000E+07	1.70073E+07
75 321 0940	75 328 1205	106	1.09000E+07	6.02398E+06
75 328 1205	75 335 1200	70	8.14000E+06	2.96656E+06
WINTER 1975		115	1.55920E+08	8.27327E+07
SPRING 1975		116	2.60980E+08	1.45279E+08
SUMMER 1975		86	1.35380E+08	4.86767E+07
FALL 1975		84	2.25880E+08	1.34060E+08
TOTAL 1975		102	7.71520E+08	4.07810E+08

WEIR 103 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	124	8.10000E+06	4.88959E-01
74 357 1050	74 364 1040	62	2.80000E+06	2.44085E-01
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	133	1.02000E+07	5.24448E-01
75 013 1200	75 020 1040	160	1.71000E+07	6.30915E-01
75 020 1040	75 027 1155	132	1.65000E+07	5.20505E-01
75 027 1155	75 034 1400	37	9.57000E+06	1.45505E-01
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	101	1.64000E+07	3.98265E-01
75 049 1600	75 055 1425	69	1.01000E+07	2.71688E-01
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	41	8.10000E+06	1.62066E-01
75 069 1355	75 076 1600	180	3.77000E+07	7.09779E-01
75 076 1600	75 083 1545	130	6.80000E+07	5.12618E-01
75 083 1545	75 090 1350	92	3.23000E+07	3.61199E-01
75 090 1350	75 097 1540	103	1.87000E+07	4.06151E-01
75 097 1540	75 104 1540	15	1.34000E+07	6.07256E-02
75 104 1540	75 111 1555	15	1.92000E+07	5.79653E-02
75 111 1555	75 118 1540	26	2.29000E+07	1.02129E-01
75 118 1540	75 125 1615	51	3.86000E+07	2.01893E-01
75 125 1615	75 132 1610	55	3.02000E+07	2.15694E-01
75 132 1610	75 139 1515	8	2.99000E+07	3.02839E-02
75 139 1515	75 147 .	204	1.48000E+07	8.04416E-01
75 147 1435	75 153 1705	222	1.01000E+07	8.75394E-01
75 153 1705	75 160 1540	121	7.29000E+06	4.77129E-01
75 160 1540	75 167 1505	217	6.65000E+06	8.55678E-01
75 167 1505	75 174 1245	153	1.25000E+07	6.03312E-01
75 174 1245	75 181 .	75	2.13000E+06	2.94164E-01
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	98	4.75000E+07	3.84858E-01
75 195 1600	75 202 1515	37	2.91000E+07	1.44716E-01
75 202 1515	75 209 1400	36	7.22000E+06	1.41167E-01
75 209 1400	75 216 .	105	3.15000E+06	4.14038E-01
75 216 .	75 223 1450	54	4.09000E+06	2.13722E-01
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	40	7.61000E+06	1.56546E-01
75 239 1040	75 244 1220	56	5.51000E+06	2.22003E-01
75 244 1220	75 251 1415	138	4.30000E+06	5.44164E-01
75 251 1500	75 258 1500	2	2.32000E+06	9.54259E-03
75 258 1500	75 265 1500	2	3.03000E+06	9.46372E-03
75 265 1500	75 272 1445	162	8.88000E+07	6.38801E-01
75 272 1445	75 280 1220	107	1.65000E+07	4.21924E-01
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	86	1.28000E+07	3.40300E-01
75 328 1600	75 335 1555	68	1.23000E+07	2.69322E-01
WINTER 1975		102	1.37330E+08	3.22437E+00
SPRING 1975		88	3.43900E+08	4.50032E+00
SUMMER 1975		90	1.44642E+08	3.90733E+00
FALL 1975		81	2.53650E+08	2.23352E+00
TOTAL 1975		90	8.79522E+08	1.38655E+01

WEIR 105 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	252	2.15000E+06	6.72000E+00
75 013 1500	75 020 1150	182	3.43000E+06	4.85333E+00
75 020 1140	75 027 1320	94	3.41000E+06	2.52000E+00
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	109	3.92000E+06	2.90667E+00
75 041 1130	75 049 1100	68	2.94000E+06	1.81867E+00
75 049 1100	75 055 1100	92	1.74000E+06	2.46400E+00
75 055 1100	75 062 1120	114	2.33000E+06	3.04000E+00
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	164	6.44000E+06	4.37333E+00
75 076 1150	75 083 1220	176	1.22000E+07	4.69333E+00
75 083 1220	75 090 1110	149	5.53000E+06	3.97333E+00
75 090 1110	75 097 1110	124	2.83000E+06	3.30667E+00
75 097 1110	75 104 1105	112	1.82000E+06	2.98667E+00
75 104 1105	75 111 1050	109	2.65000E+06	2.90667E+00
75 111 1050	75 118 1100	145	3.19000E+06	3.86667E+00
75 118 1100	75 125 1130	122	5.68000E+06	3.25333E+00
75 125 1130	75 132 1040	93	3.77000E+06	2.48533E+00
75 132 1040	75 139 1040	137	4.08000E+06	3.65333E+00
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	66	1.08000E+06	1.76533E+00
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	325	2.88000E+05	8.66667E+00
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	45	8.64000E+06	1.20000E+00
75 195 1040	75 202 1030	38	4.77000E+06	1.01600E+00
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	173	1.50000E+06	4.61333E+00
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	134	2.27000E+07	3.57333E+00
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	172	3.89000E+06	4.58667E+00
75 287 0850	75 293 0850	218	4.64000E+06	5.81333E+00
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		130	2.18300E+07	2.43227E+01
SPRING 1975		127	5.24300E+07	3.72640E+01
SUMMER 1975		145	2.01269E+07	1.54960E+01
FALL 1975		175	4.65736E+07	1.39733E+01
TOTAL 1975		137	1.40961E+08	9.10560E+01

WEIR 106 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	279	5.19000E+06	2.92760E+00
75 013 1520	75 020 1150	251	5.79000E+06	2.63379E+00
75 020 1150	75 027 1340	141	6.34000E+06	1.47954E+00
75 027 1340	75 034 1050	121	4.30000E+06	1.26967E+00
75 034 1050	75 041 1145	196	6.39000E+06	2.05666E+00
75 041 1145	75 049 1120	195	6.28000E+06	2.04617E+00
75 049 1120	75 055 1120	157	3.69000E+06	1.64743E+00
75 055 1120	75 062 1135	.	4.76000E+06	.
75 062 1135	75 069 1120	248	2.68000E+06	2.60231E+00
75 069 1120	75 076 1205	288	1.37000E+07	3.02204E+00
75 076 1205	75 083 1240	285	2.61000E+07	2.99056E+00
75 083 1240	75 090 1130	134	1.09000E+07	1.40609E+00
75 090 1130	75 097 1125	104	6.59000E+06	1.09129E+00
75 097 1125	75 104 1125	105	5.47000E+06	1.10178E+00
75 104 1125	75 111 1105	89	7.82000E+06	9.29696E-01
75 111 1105	75 118 1110	108	1.09000E+07	1.13326E+00
75 118 1110	75 125 1150	6	1.77000E+07	6.61070E-02
75 125 1150	75 132 1055	152	8.35000E+06	1.59496E+00
75 132 1055	75 139 1100	173	8.81000E+06	1.81532E+00
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	313	2.79000E+06	3.28437E+00
75 153 1045	75 160 1055	312	4.53000E+06	3.27387E+00
75 160 1055	75 167 1030	337	4.32000E+06	3.53620E+00
75 167 1030	75 174 1020	132	3.81000E+06	1.38510E+00
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	465	2.37000E+07	4.87933E+00
75 195 1050	75 202 .	44	1.14000E+07	4.64848E-01
75 202 .	75 209 1145	48	2.58000E+06	5.03673E-01
75 209 1145	75 216 1020	96	1.71000E+06	1.01154E+00
75 216 1020	75 223 1055	72	1.37000E+06	7.58657E-01
75 223 1055	75 230 1130	59	5.59000E+06	6.19098E-01
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	2	2.62000E+06	1.81532E-02
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	.	1.72000E+06	.
75 265 1100	75 272 1040	183	5.13000E+07	1.92025E+00
75 272 1040	75 280 0850	133	6.10000E+06	1.39559E+00
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	187	1.01000E+07	1.96222E+00
75 293 0900	75 301 1005	162	6.64000E+06	1.69990E+00
75 301 1005	75 307 0850	143	4.20000E+06	1.50052E+00
75 307 0850	75 314 1250	149	4.12000E+06	1.56348E+00
75 314 1250	75 321 1155	155	1.06000E+07	1.62644E+00
75 321 1155	75 328 1040	170	4.86000E+06	1.78384E+00
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		191	4.27400E+07	1.40609E+01
SPRING 1975		167	1.25340E+08	2.10378E+01
SUMMER 1975		174	6.73110E+07	1.64323E+01
FALL 1975		143	1.15510E+08	1.34704E+01
TOTAL 1975		167	3.50901E+08	6.50014E+01

WEIR 107 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	165	1.08000E+06	5.85106E+00
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	163	2.58000E+06	5.78014E+00
75 013 1600	75 021 1220	133	2.94000E+06	4.71631E+00
75 021 1220	75 027 1020	119	2.34000E+06	4.21986E+00
75 027 1020	75 034 0955	164	1.80000E+06	5.81560E+00
75 034 0955	75 041 1030	159	4.05000E+06	5.63830E+00
75 041 1030	75 049 1025	158	3.04000E+06	5.60284E+00
75 049 1025	75 055 1020	244	1.74000E+06	8.65248E+00
75 055 1020	75 062 1040	149	2.43000E+06	5.28369E+00
75 062 1040	75 069 1000	76	1.45000E+06	2.69858E+00
75 069 1120	75 076 1045	159	6.52000E+06	5.63830E+00
75 076 1045	75 083 1110	212	7.84000E+06	7.51773E+00
75 083 1110	75 090 1030	87	4.25000E+06	3.08156E+00
75 090 1030	75 097 1025	128	3.49000E+06	4.53901E+00
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	85	2.28000E+06	3.00355E+00
75 111 1015	75 118 1005	119	2.40000E+06	4.21986E+00
75 118 1005	75 125 1045	77	4.05000E+06	2.74468E+00
75 125 1045	75 132 1000	98	2.93000E+06	3.47518E+00
75 132 1000	75 139 0950	88	3.73000E+06	3.12411E+00
75 139 0950	75 147 0950	.	3.61000E+06	.
75 147 0950	75 153 0945	201	1.15000E+06	7.12766E+00
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	81	9.51000E+05	2.89007E+00
75 167 0935	75 174 1107	0	9.19000E+05	0.00000E+00
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	146	4.22000E+06	5.17730E+00
75 195 0955	75 202 1000	44	3.68000E+06	1.57092E+00
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	106	8.28000E+05	3.75887E+00
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	122	.	4.32624E+00
WINTER 1975		162	2.58540E+07	5.15603E+01
SPRING 1975		121	4.37500E+07	4.71702E+01

WEIR 107 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		76	1.65460E+07	1.33972E+01
FALL 1975		122	1.24900E+06	4.32624E+00
TOTAL 1975		126	8.73990E+07	1.16454E+02

WEIR 108 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	227	8.92000E+06	1.50931E+00
74 357 1120	74 364 1110	207	2.57000E+06	1.37633E+00
74 364 1110	75 006 1315	248	3.18000E+06	1.64894E+00
75 006 1315	75 013 1245	170	6.23000E+06	1.13032E+00
75 013 1245	75 020 1110	138	1.15000E+07	9.17553E-01
75 020 1110	75 027 1240	191	1.05000E+07	1.26995E+00
75 027 1240	75 034 1340	143	6.94000E+06	9.50798E-01
75 034 1340	75 041 1340	178	1.27000E+07	1.18351E+00
75 041 1340	75 049 1455	153	1.06000E+07	1.01729E+00
75 049 1455	75 055 1345	173	6.55000E+06	1.15027E+00
75 055 1345	75 062 1340	123	8.26000E+06	8.17819E-01
75 062 1340	75 069 1230	93	5.57000E+06	6.16356E-01
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	119	3.64000E+07	7.91223E-01
75 083 1500	75 090 1405	84	2.49000E+07	5.59176E-01
75 090 1405	75 097 1510	116	1.12000E+07	7.71277E-01
75 097 1510	75 104 1525	54	8.94000E+06	3.37713E-01
75 104 1525	75 111 1530	64	1.20000E+07	4.22872E-01
75 111 1530	75 118 1500	84	1.22000E+07	5.58511E-01
75 118 1500	75 125 1545	95	2.28000E+07	6.31649E-01
75 125 1545	75 132 1545	109	1.93000E+07	7.24734E-01
75 132 1545	75 139 1440	99	1.19000E+07	6.57580E-01
75 139 1440	75 147 1415	135	9.20000E+06	8.97606E-01
75 147 1415	75 153 1630	94	9.92000E+06	6.25000E-01
75 153 1630	75 160 1510	223	6.59000E+06	1.48271E+00
75 160 1510	75 167 1400	78	6.61000E+06	5.16622E-01
75 167 1400	75 174 1300	11	4.48000E+06	7.64628E-02
75 174 1300	75 181 .	253	1.95000E+06	1.68218E+00
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	53	4.57000E+07	3.51064E-01
75 195 1515	75 202 1440	48	2.51000E+07	3.17819E-01
75 202 1440	75 20[illegible] 1330	115	6.67000E+06	7.64628E-01
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	51	6.27000E+06	3.40426E-01
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	105	1.56000E+06	6.98138E-01
75 237 1345	75 244 1155	76	9.72000E+06	5.07314E-01
75 244 1155	75 251 1325	2	4.44000E+06	1.60239E-02
75 251 1325	75 258 1445	2	1.63000E+06	1.38963E-02
75 258 1445	75 265 1440	2	3.49000E+06	1.64894E-02
75 265 1440	75 272 1415	117	1.14000E+08	7.77926E-01
75 272 1415	75 280 1150	86	1.32000E+07	5.70479E-01
75 280 1150	75 287 1220	915	2.13000E+07	6.08378E+00
75 287 1220	75 293 1145	525	1.72000E+07	3.49069E+00
75 293 1145	75 301 1210	1250	1.32000E+07	8.31117E+00

WEIR 108 1975 TOTAL MANGANESE
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	17	8.68000E+06	1.11702E-01
75 307 1320	75 314 1545	66	8.49000E+06	4.38165E-01
75 314 1545	75 322 1255	174	2.23000E+07	1.15691E+00
75 322 1255	75 328 1540	139	8.63000E+06	9.24202E-01
75 328 1540	75 335 1520	58	8.23000E+06	3.86968E-01
WINTER 1975		177	1.01520E+08	1.29721E+01
SPRING 1975		95	2.28430E+08	7.61370E+00
SUMMER 1975		101	1.26513E+08	6.73737E+00
FALL 1975		258	2.44790E+08	2.22984E+01
TOTAL 1975		162	7.01253E+08	4.96215E+01

WEIR 101 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	22	1.39000E+07	9.91589E-02
74 357 1000	74 364 0925	2	4.92000E+06	7.08278E-03
74 364 0925	75 006 1115	10	5.46000E+06	4.60381E-02
75 006 1115	75 013 1100	10	1.23000E+07	4.38247E-02
75 013 1100	75 020 1000	15	1.84000E+07	6.81718E-02
75 020 1000	75 027 1105	19	1.65000E+07	8.23373E-02
75 027 1105	75 034 1145	10	1.18000E+07	4.51527E-02
75 034 1145	75 041 1240	7	2.04000E+07	3.31120E-02
75 041 1240	75 049 1340	12	1.67000E+07	5.35635E-02
75 049 1340	75 055 1205	12	1.02000E+07	5.26782E-02
75 055 1205	75 062 1225	8	1.33000E+07	3.61664E-02
75 062 1225	75 069 1210	10	8.99000E+06	4.32935E-02
75 069 1210	75 076 1320	18	3.25000E+07	8.18946E-02
75 076 1320	75 083 1345	43	5.73000E+07	1.88136E-01
75 083 1340	75 090 1245	21	3.10000E+07	9.29615E-02
75 090 1245	75 097 1215	16	1.74000E+07	7.30412E-02
75 097 1215	75 104 1210	4	1.25000E+07	1.96104E-02
75 104 1210	75 111 1205	8	1.70000E+07	3.62107E-02
75 111 1205	75 118 1205	5	1.86000E+07	2.15139E-02
75 118 1205	75 125 1305	7	3.08000E+07	3.24923E-02
75 125 1305	75 132 1135	12	2.27000E+07	5.40062E-02
75 132 1135	75 139 1150	0	2.22000E+07	0.00000E+00
75 139 1150	75 147 1130	1	1.18000E+07	3.80699E-03
75 147 1130	75 153 1355	1	7.37000E+06	3.09872E-03
75 153 1355	75 160 1150	4	6.23000E+06	1.67331E-02
75 160 1150	75 167 .	24	5.45000E+06	1.06684E-01
75 167 .	75 174 1125	37	6.64000E+06	1.62904E-01
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	190	3.78000E+07	8.41080E-01
75 195 1220	75 202 1140	62	2.82000E+07	2.74900E-01
75 202 1140	75 209 1205	21	8.55000E+06	9.47322E-02
75 209 1205	75 216 1100	37	4.55000E+06	1.62904E-01
75 216 1100	75 223 1130	44	6.08000E+06	1.95219E-01
75 223 1130	75 230 1200	59	1.34000E+07	2.62063E-01
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	69	1.07000E+07	3.07216E-01
75 244 1020	75 251 1130	29	9.93000E+06	1.28375E-01
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	32	5.27000E+06	1.43426E-01
75 265 1150	75 272 1200	33	8.27000E+07	1.44754E-01
75 272 1200	75 280 0925	13	1.84000E+07	5.66622E-02
75 280 0925	75 287 0920	25	2.45000E+07	1.09783E-01
75 287 0920	75 293 0950	22	2.20000E+07	9.82736E-02
75 293 0950	75 301 1040	12	1.71000E+07	5.48915E-02

WEIR 101 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	12	1.12000E+07	5.22355E-02
75 307 1040	75 314 1330	13	1.15000E+07	5.93183E-02
75 314 1330	75 321 0920	10	2.55000E+07	4.55954E-02
75 321 0920	75 328 1150	7	1.34000E+07	2.99690E-02
75 328 1150	75 335 1145	8	1.07000E+07	3.59451E-02
WINTER 1975		10	1.60080E+08	5.67286E-01
SPRING 1975		11	2.90160E+08	6.50066E-01
SUMMER 1975		42	1.34624E+08	2.42444E+00
FALL 1975		17	2.55920E+08	9.59230E-01
TOTAL 1975		20	8.40784E+08	4.60102E+00

WEIR 102 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	18	1.27000E+07	1.16538E+06
74 357 1020	74 364 1015	137	5.23000E+06	3.73571E+06
74 364 1025	75 006 1140	29	4.35000E+06	6.53180E+05
75 006 1140	75 013 1125	13	1.12000E+07	7.76642E+05
75 013 1125	75 020 1020	11	1.78000E+07	1.04870E+06
75 020 1020	75 027 1135	11	1.78000E+07	1.02086E+06
75 027 1135	75 034 1205	8	1.05000E+07	4.14416E+05
75 034 1255	75 041 1300	12	1.92000E+07	1.22127E+06
75 041 1300	75 049 1350	11	1.54000E+07	9.07299E+05
75 049 1350	75 055 1220	5	9.00000E+06	2.34150E+05
75 055 1220	75 062 1240	11	1.16000E+07	6.53180E+05
75 062 1240	75 069 1415	16	6.64000E+06	5.71220E+05
75 069 1415	75 076 1330	13	3.18000E+07	2.23827E+06
75 076 1330	75 083 1400	18	6.04000E+07	5.66840E+06
75 083 1400	75 090 1300	14	2.56000E+07	1.88196E+06
75 090 1300	75 097 1240	16	1.34000E+07	1.15276E+06
75 097 1240	75 104 1225	2	9.38000E+06	1.09058E+05
75 104 1225	75 111 1225	16	1.36000E+07	1.14161E+06
75 111 1225	75 118 1225	4	1.55000E+07	3.60428E+05
75 118 1225	75 125 1320	6	2.88000E+07	9.62503E+05
75 125 1320	75 132 1150	4	2.09000E+07	4.58754E+05
75 132 1150	75 139 1205	9	2.03000E+07	9.77956E+05
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	3	5.75000E+06	8.78389E+04
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	61	5.84000E+06	1.84517E+06
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	66	4.92000E+07	1.68532E+07
75 195 1240	75 202 1200	31	2.68000E+07	4.31762E+06
75 202 1200	75 209 1245	16	6.30000E+06	5.38686E+05
75 209 1245	75 216 1115	12	4.15000E+06	2.53154E+05
75 216 1115	75 223 1140	9	3.90000E+06	1.79140E+05
75 223 1140	75 230 1220	54	1.73000E+07	4.84364E+06
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	20	7.60000E+06	7.88530E+05
75 251 1145	75 258 1200	10	2.58000E+06	1.34515E+05
75 258 1200	75 265 1205	22	3.69000E+06	4.30949E+05
75 265 1205	75 272 1230	20	9.24000E+07	9.53869E+06
75 272 1230	75 280 0940	7	1.26000E+07	4.32920E+05
75 280 0940	75 287 0940	38	1.89000E+07	3.75438E+06
75 287 0940	75 293 1010	12	1.68000E+07	1.04234E+06
75 293 1010	75 301 1055	16	1.26000E+07	1.07080E+06

WEIR 102 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	7	8.76000E+06	3.00982E+05
75 307 1050	75 314 1345	6	7.61000E+06	2.44409E+05
75 314 1345	75 321 0940	6	2.33000E+07	7.02158E+05
75 321 0940	75 328 1205	4	1.09000E+07	2.00610E+05
75 328 1205	75 335 1200	3	8.14000E+06	1.27745E+05
WINTER 1975		24	1.55920E+08	1.24020E+07
SPRING 1975		10	2.60980E+08	1.56108E+07
SUMMER 1975		35	1.35380E+08	2.88306E+07
FALL 1975		13	2.25880E+08	1.87690E+07
TOTAL 1975		19	7.71520E+08	7.50412E+07

WEIR 103 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	25	8.10000E+06	9.77918E-02
74 357 1050	74 364 1040	21	2.80000E+06	8.20189E-02
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	13	1.02000E+07	5.08675E-02
75 013 1200	75 020 1040	24	1.71000E+07	9.30599E-02
75 020 1040	75 027 1155	11	1.65000E+07	4.21924E-02
75 027 1155	75 034 1400	12	9.57000E+06	4.88959E-02
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	12	1.64000E+07	4.77129E-02
75 049 1600	75 055 1425	8	1.01000E+07	3.26104E-02
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	10	8.10000E+06	4.06151E-02
75 069 1355	75 076 1600	20	3.77000E+07	8.00473E-02
75 076 1600	75 083 1545	20	6.80000E+07	7.84700E-02
75 083 1545	75 090 1350	12	3.23000E+07	4.77129E-02
75 090 1350	75 097 1540	13	1.87000E+07	5.00789E-02
75 097 1540	75 104 1540	1	1.34000E+07	5.48107E-03
75 104 1540	75 111 1555	2	1.92000E+07	9.50315E-03
75 111 1555	75 118 1540	5	2.29000E+07	2.04259E-02
75 118 1540	75 125 1615	10	3.86000E+07	3.98265E-02
75 125 1615	75 132 1610	4	3.02000E+07	1.61672E-02
75 132 1610	75 139 1515	2	2.99000E+07	6.82177E-03
75 139 1515	75 147 .	0	1.48000E+07	1.30126E-03
75 147 1435	75 153 1705	6	1.01000E+07	2.35804E-02
75 153 1705	75 160 1540	5	7.29000E+06	1.79022E-02
75 160 1540	75 167 1505	39	6.65000E+06	1.52208E-01
75 167 1505	75 174 1245	72	1.25000E+07	2.85095E-01
75 174 1245	75 181 .	13	2.13000E+06	4.92902E-02
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	57	4.75000E+07	2.25158E-01
75 195 1600	75 202 1515	39	2.91000E+07	1.55363E-01
75 202 1515	75 209 1400	16	7.22000E+06	6.23028E-02
75 209 1400	75 216 .	19	3.15000E+06	7.33438E-02
75 216 .	75 223 1450	43	4.09000E+06	1.69953E-01
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	7	7.61000E+06	2.56309E-02
75 239 1040	75 244 1220	62	5.51000E+06	2.43691E-01
75 244 1220	75 251 1415	30	4.30000E+06	1.19874E-01
75 251 1500	75 258 1500	20	2.32000E+06	8.08360E-02
75 258 1500	75 265 1500	12	3.03000E+06	4.77129E-02
75 265 1500	75 272 1445	23	8.88000E+07	9.06940E-02
75 272 1445	75 280 1220	12	1.65000E+07	4.69243E-02
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	7	1.28000E+07	2.93770E-02
75 328 1600	75 335 1555	15	1.23000E+07	5.91483E-02
WINTER 1975		16	1.37330E+08	4.95150E-01
SPRING 1975		8	3.43900E+08	4.20032E-01
SUMMER 1975		34	1.44642E+08	1.45994E+00
FALL 1975		17	2.53650E+08	4.74566E-01
TOTAL 1975		19	8.79522E+08	2.84968E+00

WEIR 105 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	38	2.15000E+06	1.00800E+00
75 013 1500	75 020 1150	21	3.43000E+06	5.62667E-01
75 020 1140	75 027 1320	5	3.41000E+06	1.35200E-01
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	12	3.92000E+06	3.30667E-01
75 041 1130	75 049 1100	14	2.94000E+06	3.76000E-01
75 049 1100	75 055 1100	11	1.74000E+06	3.01333E-01
75 055 1100	75 062 1120	15	2.33000E+06	4.02667E-01
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	13	6.44000E+06	3.38667E-01
75 076 1150	75 083 1220	17	1.22000E+07	4.64000E-01
75 083 1220	75 090 1110	12	5.53000E+06	3.12000E-01
75 090 1110	75 097 1110	13	2.83000E+06	3.33333E-01
75 097 1110	75 104 1105	5	1.82000E+06	1.30667E-01
75 104 1105	75 111 1050	4	2.65000E+06	1.11467E-01
75 111 1050	75 118 1100	8	3.19000E+06	2.20800E-01
75 118 1100	75 125 1130	11	5.68000E+06	3.06667E-01
75 125 1130	75 132 1040	3	3.77000E+06	7.09333E-02
75 132 1040	75 139 1040	4	4.08000E+06	1.04533E-01
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	7	1.08000E+06	1.76533E-01
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	11	2.88000E+05	2.93333E-01
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	61	8.64000E+06	1.62133E+00
75 195 1040	75 202 1030	44	4.77000E+06	1.16800E+00
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	66	1.50000E+06	1.77333E+00
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	20	2.27000E+07	5.46667E-01
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	15	3.89000E+06	3.94667E-01
75 287 0850	75 293 0850	72	4.64000E+06	1.92267E+00
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		17	2.18300E+07	3.11653E+00
SPRING 1975		9	5.24300E+07	2.56960E+00
SUMMER 1975		46	2.01269E+07	4.85600E+00
FALL 1975		36	4.65736E+07	2.86400F+00
TOTAL 1975		20	1.40961E+08	1.34061E+01

WEIR 106 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	16	5.19000E+06	1.69990E-01
75 013 1520	75 020 1150	8	5.79000E+06	8.49948E-02
75 020 1150	75 027 1340	16	6.34000E+06	1.68940E-01
75 027 1340	75 034 1050	11	4.30000E+06	1.12277E-01
75 034 1050	75 041 1145	14	6.39000E+06	1.47954E-01
75 041 1145	75 049 1120	12	6.28000E+06	1.21721E-01
75 049 1120	75 055 1120	12	3.69000E+06	1.21721E-01
75 055 1120	75 062 1135	10	4.76000E+06	1.03568E-01
75 062 1135	75 069 1120	10	2.68000E+06	1.01994E-01
75 069 1120	75 076 1205	23	1.37000E+07	2.41343E-01
75 076 1205	75 083 1240	41	2.61000E+07	4.26023E-01
75 083 1240	75 090 1130	23	1.09000E+07	2.39244E-01
75 090 1130	75 097 1125	10	6.59000E+06	1.10178E-01
75 097 1125	75 104 1125	1	5.47000E+06	1.28017E-02
75 104 1125	75 111 1105	7	7.82000E+06	6.87303E-02
75 111 1105	75 118 1110	2	1.09000E+07	2.49738E-02
75 118 1110	75 125 1150	4	1.77000E+07	3.96642E-02
75 125 1150	75 132 1055	7	8.35000E+06	7.10388E-02
75 132 1055	75 139 1100	10	8.81000E+06	1.00525E-01
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	1	2.79000E+06	1.51102E-02
75 153 1045	75 160 1055	4	4.53000E+06	4.64848E-02
75 160 1055	75 167 1030	24	4.32000E+06	2.56034E-01
75 167 1030	75 174 1020	48	3.81000E+06	5.07870E-01
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	205	2.37000E+07	2.15110E+00
75 195 1050	75 202 .	38	1.14000E+07	3.93494E-01
75 202 .	75 209 1145	38	2.58000E+06	4.00839E-01
75 209 1145	75 216 1020	72	1.71000E+06	7.52361E-01
75 216 1020	75 223 1055	30	1.37000E+06	3.11647E-01
75 223 1055	75 230 1130	97	5.59000E+06	1.01889E+00
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	36	2.62000E+06	3.76705E-01
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	16	1.72000E+06	1.63694E-01
75 265 1100	75 272 1040	33	5.13000E+07	3.46275E-01
75 272 1040	75 280 0850	12	6.10000E+06	1.23820E-01
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	15	1.01000E+07	1.58447E-01
75 293 0900	75 301 1005	16	6.64000E+06	1.71039E-01
75 301 1005	75 307 0850	10	4.20000E+06	1.05981E-01
75 307 0850	75 314 1250	12	4.12000E+06	1.23820E-01
75 314 1250	75 321 1155	13	1.06000E+07	1.35362E-01
75 321 1155	75 328 1040	7	4.86000E+06	7.64953E-02
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		12	4.27400E+07	1.03116E+00
SPRING 1975		12	1.25340E+08	1.45163E+00
SUMMER 1975		62	6.73110E+07	5.83872E+00
FALL 1975		17	1.15510E+08	1.78164E+00
TOTAL 1975		25	3.50901E+08	1.01031E+01

WEIR 107 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	10	1.08000E+06	3.40426E-01
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	29	2.58000E+06	1.02128E+00
75 013 1600	75 021 1220	14	2.94000E+06	4.89362E-01
75 021 1220	75 027 1020	12	2.34000E+06	4.36170E-01
75 027 1020	75 034 0955	7	1.80000E+06	2.64894E-01
75 034 0955	75 041 1030	8	4.05000E+06	2.75532E-01
75 041 1030	75 049 1025	8	3.04000E+06	2.70213E-01
75 049 1025	75 055 1020	17	1.74000E+06	6.13475E-01
75 055 1020	75 062 1040	14	2.43000E+06	4.96454E-01
75 062 1040	75 069 1000	6	1.45000E+06	2.16667E-01
75 069 1120	75 076 1045	25	6.52000E+06	9.00709E-01
75 076 1045	75 083 1110	35	7.84000E+06	1.25177E+00
75 083 1110	75 090 1030	14	4.25000E+06	4.92908E-01
75 090 1030	75 097 1025	15	3.49000E+06	5.21277E-01
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	13	2.28000E+06	4.60993E-01
75 111 1015	75 118 1005	16	2.40000E+06	5.81560E-01
75 118 1005	75 125 1045	9	4.05000E+06	3.08156E-01
75 125 1045	75 132 1000	9	2.93000E+06	3.08156E-01
75 132 1000	75 139 0950	22	3.73000E+06	7.69504E-01
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	44	1.15000E+06	1.56028E+00
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	12	9.51000E+05	4.39716E-01
75 167 0935	75 174 1107	286	9.19000E+05	1.01418E+01
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	70	4.22000E+06	2.49291E+00
75 195 0955	75 202 1000	48	3.68000E+06	1.69504E+00
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	170	8.28000E+05	6.02837E+00
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	25	.	8.72340E-01
WINTER 1975		13	2.58540E+07	4.20780E+00
SPRING 1975		19	4.37500E+07	7.37199E+00

WEIR 107 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		117	1.65460E+07	2.07979E+01
FALL 1975		25	1.24900E+06	8.72340E-01
TOTAL 1975		36	8.73990E+07	3.32500E+01

WEIR 108 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	36	8.92000E+06	2.39362E-01
74 357 1120	74 364 1110	38	2.57000E+06	2.50000E-01
74 364 1110	75 006 1315	21	3.18000E+06	1.38298E-01
75 006 1315	75 013 1245	19	6.23000E+06	1.25000E-01
75 013 1245	75 020 1110	40	1.15000E+07	2.66622E-01
75 020 1110	75 027 1240	11	1.05000E+07	7.31383E-02
75 027 1240	75 034 1340	19	6.94000E+06	1.29654E-01
75 034 1340	75 041 1340	18	1.27000E+07	1.19016E-01
75 041 1340	75 049 1455	16	1.06000E+07	1.09707E-01
75 049 1455	75 055 1345	10	6.55000E+06	6.42952E-02
75 055 1345	75 062 1340	10	8.26000E+06	6.78191E-02
75 062 1340	75 069 1230	12	5.57000E+06	7.77926E-02
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	18	3.64000E+07	1.17686E-01
75 083 1500	75 090 1405	26	2.49000E+07	1.73537E-01
75 090 1405	75 097 1510	20	1.12000E+07	1.32979E-01
75 097 1510	75 104 1525	9	8.94000E+06	6.14362E-02
75 104 1525	75 111 1530	11	1.20000E+07	7.24734E-02
75 111 1530	75 118 1500	8	1.22000E+07	5.02660E-02
75 118 1500	75 125 1545	10	2.28000E+07	6.43617E-02
75 125 1545	75 132 1545	7	1.93000E+07	4.93351E-02
75 132 1545	75 139 1440	10	1.19000E+07	6.98138E-02
75 139 1440	75 147 1415	4	9.20000E+06	2.44016E-02
75 147 1415	75 153 1630	16	9.92000E+06	1.03723E-01
75 153 1630	75 160 1510	8	6.59000E+06	5.50532E-02
75 160 1510	75 167 1400	20	6.61000E+06	1.30984E-01
75 167 1400	75 174 1300	45	4.48000E+06	3.00532E-01
75 174 1300	75 181 .	21	1.95000E+06	1.38963E-01
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	53	4.57000E+07	3.50399E-01
75 195 1515	75 202 1440	29	2.51000E+07	1.96144E-01
75 202 1440	75 209 1330	26	6.67000E+06	1.71543E-01
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	21	6.27000E+06	1.41622E-01
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	8	1.56000E+06	5.03324E-02
75 237 1345	75 244 1155	50	9.72000E+06	3.33112E-01
75 244 1155	75 251 1325	17	4.44000E+06	1.15691E-01
75 251 1325	75 258 1445	19	1.63000E+06	1.23670E-01
75 258 1445	75 265 1440	15	3.49000E+06	9.84043E-02
75 265 1440	75 272 1415	16	1.14000E+08	1.03723E-01
75 272 1415	75 280 1150	12	1.32000E+07	7.97872E-02
75 280 1150	75 287 1220	15	2.13000E+07	1.01729E-01
75 287 1220	75 293 1145	13	1.72000E+07	8.71011E-02
75 293 1145	75 301 1210	5	1.32000E+07	3.53059E-02

WEIR 108 1975 TOTAL ZINC
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	13	8.68000E+06	8.31117E-02
75 307 1320	75 314 1545	8	8.49000E+06	5.05319E-02
75 314 1545	75 322 1255	10	2.23000E+07	6.64894E-02
75 322 1255	75 328 1540	17	8.63000E+06	1.14362E-01
75 328 1540	75 335 1520	6	8.23000E+06	4.23537E-02
WINTER 1975		22	1.01520E+08	1.58291E+00
SPRING 1975		13	2.28430E+08	9.97806E-01
SUMMER 1975		28	1.26513E+08	1.86868E+00
FALL 1975		13	2.44790E+08	1.10226E+00
TOTAL 1975		18	7.01253E+08	5.55166E+00

WEIR 101 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	5	1.39000E+07	2.19566E-02
74 357 1000	74 364 0925	1	4.92000E+06	2.83311E-03
74 364 0925	75 006 1115	2	5.46000E+06	7.08278E-03
75 006 1115	75 013 1100	1	1.23000E+07	3.18725E-03
75 013 1100	75 020 1000	2	1.84000E+07	9.07481E-03
75 020 1000	75 027 1105	1	1.65000E+07	2.25764E-03
75 027 1105	75 034 1145	0	1.18000E+07	0.00000E+00
75 034 1145	75 041 1240	0	2.04000E+07	0.00000E+00
75 041 1240	75 049 1340	0	1.67000E+07	0.00000E+00
75 049 1340	75 055 1205	12	1.02000E+07	5.13502E-02
75 055 1205	75 062 1225	1	1.33000E+07	4.82514E-03
75 062 1225	75 069 1210	8	8.99000E+06	3.40859E-02
75 069 1210	75 076 1320	5	3.25000E+07	2.03187E-02
75 076 1320	75 083 1345	28	5.73000E+07	1.23506E-01
75 083 1340	75 090 1245	8	3.10000E+07	3.68747E-02
75 090 1245	75 097 1215	4	1.74000E+07	1.80168E-02
75 097 1215	75 104 1210	0	1.25000E+07	0.00000E+00
75 104 1210	75 111 1205	0	1.70000E+07	0.00000E+00
75 111 1205	75 118 1205	0	1.86000E+07	0.00000E+00
75 118 1205	75 125 1305	0	3.08000E+07	0.00000E+00
75 125 1305	75 132 1135	11	2.27000E+07	4.82514E-02
75 132 1135	75 139 1150	0	2.22000E+07	0.00000E+00
75 139 1150	75 147 1130	0	1.18000E+07	0.00000E+00
75 147 1130	75 153 1355	0	7.37000E+06	0.00000E+00
75 153 1355	75 160 1150	69	6.23000E+06	3.06773E-01
75 160 1150	75 167 .	13	5.45000E+06	5.88756E-02
75 167 .	75 174 1125	33	6.64000E+06	1.47410E-01
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	94	3.78000E+07	4.14343E-01
75 195 1220	75 202 1140	14	2.82000E+07	6.37450E-02
75 202 1140	75 209 1205	12	8.55000E+06	5.40062E-02
75 209 1205	75 216 1100	102	4.55000E+06	4.51527E-01
75 216 1100	75 223 1130	33	6.08000E+06	1.45640E-01
75 223 1130	75 230 1200	43	1.34000E+07	1.92120E-01
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	31	1.07000E+07	1.36786E-01
75 244 1020	75 251 1130	64	9.93000E+06	2.82869E-01
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	109	5.27000E+06	4.82514E-01
75 265 1150	75 272 1200	19	8.27000E+07	8.45507E-02
75 272 1200	75 280 0925	0	1.84000E+07	0.00000E+00
75 280 0925	75 287 0920	140	2.45000E+07	6.19743E-01
75 287 0920	75 293 0950	0	2.20000E+07	0.00000E+00
75 293 0950	75 301 1040	23	1.71000E+07	1.03143E-01

WEIR 101 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	0	1.12000E+07	0.00000E+00
75 307 1040	75 314 1330	0	1.15000E+07	0.00000E+00
75 314 1330	75 321 0920	0	2.55000E+07	0.00000E+00
75 321 0920	75 328 1150	0	1.34000E+07	0.00000E+00
75 328 1150	75 335 1145	0	1.07000E+07	0.00000E+00
WINTER 1975		2	1.60080E+08	1.02568E-01
SPRING 1975		5	2.90160E+08	2.81054E-01
SUMMER 1975		34	1.34624E+08	1.97123E+00
FALL 1975		27	2.55920E+08	1.57282E+00
TOTAL 1975		17	8.40784E+08	3.92767E+00

WEIR 102 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	6	1.27000E+07	3.91992E+05
74 357 1020	74 364 1015	0	5.23000E+06	0.00000E+00
74 364 1025	75 006 1140	2	4.35000E+06	3.62878E+04
75 006 1140	75 013 1125	0	1.12000E+07	0.00000E+00
75 013 1125	75 020 1020	1	1.78000E+07	1.20647E+05
75 020 1020	75 027 1135	0	1.78000E+07	0.00000E+00
75 027 1135	75 034 1205	0	1.05000E+07	0.00000E+00
75 034 1255	75 041 1300	4	1.92000E+07	3.84400E+05
75 041 1300	75 049 1350	0	1.54000E+07	0.00000E+00
75 049 1350	75 055 1220	6	9.00000E+06	2.84359E+05
75 055 1220	75 062 1240	2	1.16000E+07	1.14911E+05
75 062 1240	75 069 1415	1	6.64000E+06	2.97727E+04
75 069 1415	75 076 1330	62	3.18000E+07	1.02131E+07
75 076 1330	75 083 1400	12	6.04000E+07	3.84192E+06
75 083 1400	75 090 1300	7	2.56000E+07	9.18290E+05
75 090 1300	75 097 1240	121	1.34000E+07	8.45360E+06
75 097 1240	75 104 1225	0	9.38000E+06	0.00000E+00
75 104 1225	75 111 1225	0	1.36000E+07	0.00000E+00
75 111 1225	75 118 1225	0	1.55000E+07	0.00000E+00
75 118 1225	75 125 1320	0	2.88000E+07	0.00000E+00
75 125 1320	75 132 1150	0	2.09000E+07	0.00000E+00
75 132 1150	75 139 1205	0	2.03000E+07	0.00000E+00
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	0	5.75000E+06	0.00000E+00
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	71	5.84000E+06	2.14966E+06
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	29	4.92000E+07	7.33639E+06
75 195 1240	75 202 1200	10	2.68000E+07	1.34559E+06
75 202 1200	75 209 1245	13	6.30000E+06	4.13869E+05
75 209 1245	75 216 1115	13	4.15000E+06	2.81283E+05
75 216 1115	75 223 1140	105	3.90000E+06	2.13504E+06
75 223 1140	75 230 1220	36	1.73000E+07	3.26517E+06
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	13	7.60000E+06	5.27007E+05
75 251 1145	75 258 1200	21	2.58000E+06	2.81137E+05
75 258 1200	75 265 1205	28	3.69000E+06	5.36762E+05
75 265 1205	75 272 1230	25	9.24000E+07	1.22847E+07
75 272 1230	75 280 0940	0	1.26000E+07	0.00000E+00
75 280 0940	75 287 0940	0	1.89000E+07	0.00000E+00
75 287 0940	75 293 1010	0	1.68000E+07	0.00000E+00
75 293 1010	75 301 1055	11	1.26000E+07	6.96350E+05

WEIR 102 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	0	8.76000E+06	0.00000E+00
75 307 1050	75 314 1345	0	7.61000E+06	0.00000E+00
75 314 1345	75 321 0940	0	2.33000E+07	0.00000E+00
75 321 0940	75 328 1205	0	1.09000E+07	0.00000E+00
75 328 1205	75 335 1200	0	8.14000E+06	0.00000E+00
WINTER 1975		2	1.55920E+08	1.36237E+06
SPRING 1975		17	2.60980E+08	2.34567E+07
SUMMER 1975		39	1.35380E+08	1.69270E+07
FALL 1975		8	2.25880E+08	1.43259E+07
TOTAL 1975		14	7.71520E+08	5.60422E+07

WEIR 103 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	2	8.10000E+06	7.88644E-03
74 357 1050	74 364 1040	1	2.80000E+06	5.04732E-03
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	0	1.02000E+07	0.00000E+00
75 013 1200	75 020 1040	2	1.71000E+07	7.80757E-03
75 020 1040	75 027 1155	1	1.65000E+07	2.44479E-03
75 027 1155	75 034 1400	0	9.57000E+06	0.00000E+00
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	0	1.64000E+07	0.00000E+00
75 049 1600	75 055 1425	4	1.01000E+07	1.57729E-02
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	1	8.10000E+06	5.20505E-03
75 069 1355	75 076 1600	19	3.77000E+07	7.53155E-02
75 076 1600	75 083 1545	8	6.80000E+07	3.09937E-02
75 083 1545	75 090 1350	5	3.23000E+07	1.98344E-02
75 090 1350	75 097 1540	6	1.87000E+07	2.23975E-02
75 097 1540	75 104 1540	18	1.34000E+07	7.29495E-02
75 104 1540	75 111 1555	0	1.92000E+07	0.00000E+00
75 111 1555	75 118 1540	0	2.29000E+07	0.00000E+00
75 118 1540	75 125 1615	0	3.86000E+07	0.00000E+00
75 125 1615	75 132 1610	105	3.02000E+07	4.14038E-01
75 132 1610	75 139 1515	0	2.99000E+07	0.00000F+00
75 139 1515	75 147 .	0	1.48000E+07	0.00000E+00
75 147 1435	75 153 1705	0	1.01000E+07	0.00000E+00
75 153 1705	75 160 1540	0	7.29000E+06	0.00000E+00
75 160 1540	75 167 1505	14	6.65000E+06	5.71767E-02
75 167 1505	75 174 1245	53	1.25000E+07	2.08202E-01
75 174 1245	75 181 .	8	2.13000E+06	3.28864E-02
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	28	4.75000E+07	1.10016E-01
75 195 1600	75 202 1515	7	2.91000E+07	2.78785E-02
75 202 1515	75 209 1400	7	7.22000E+06	2.72082E-02
75 209 1400	75 216 .	0	3.15000E+06	0.00000E+00
75 216 .	75 223 1450	16	4.09000E+06	6.30915E-02
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	0	7.61000E+06	0.00000E+00
75 239 1040	75 244 1220	86	5.51000E+06	3.39117E-01
75 244 1220	75 251 1415	40	4.30000E+06	1.57729E-01
75 251 1500	75 258 1500	23	2.32000E+06	9.14826E-02
75 258 1500	75 265 1500	138	3.03000E+06	5.44164E-01
75 265 1500	75 272 1445	24	8.88000E+07	9.30599E-02
75 272 1445	75 280 1220	0	1.65000E+07	0.00000E+00
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	0	1.28000E+07	0.00000E+00
75 328 1600	75 335 1555	0	1.23000E+07	0.00000E+00
WINTER 1975		1	1.37330E+08	3.89590E-02
SPRING 1975		12	3.43900E+08	6.40733E-01
SUMMER 1975		20	1.44642E+08	8.65576E-01
FALL 1975		32	2.53650E+08	8.86435E-01
TOTAL 1975		16	8.79522E+08	2.43170E+00

WEIR 105 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	6	2.15000E+06	1.49600E-01
75 013 1500	75 020 1150	6	3.43000E+06	1.69067E-01
75 020 1140	75 027 1320	0	3.41000E+06	0.00000E+00
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	1	3.92000E+06	3.46667E-02
75 041 1130	75 049 1100	0	2.94000E+06	0.00000E+00
75 049 1100	75 055 1100	5	1.74000E+06	1.45333E-01
75 055 1100	75 062 1120	2	2.33000E+06	5.36000E-02
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	3	6.44000E+06	8.08000E-02
75 076 1150	75 083 1220	43	1.22000E+07	1.15200E+00
75 083 1220	75 090 1110	1	5.53000E+06	3.25333E-02
75 090 1110	75 097 1110	18	2.83000E+06	4.85333E-01
75 097 1110	75 104 1105	0	1.82000E+06	0.00000E+00
75 104 1105	75 111 1050	0	2.65000E+06	0.00000E+00
75 111 1050	75 118 1100	0	3.19000E+06	0.00000E+00
75 118 1100	75 125 1130	0	5.68000E+06	0.00000E+00
75 125 1130	75 132 1040	13	3.77000E+06	3.54667E-01
75 132 1040	75 139 1040	0	4.08000E+06	0.00000E+00
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	0	1.08000E+06	0.00000E+00
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	7	2.88000E+05	1.98667E-01
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	41	8.64000E+06	1.09333E+00
75 195 1040	75 202 1030	35	4.77000E+06	9.28000E-01
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	31	1.50000E+06	8.29333E-01
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	12	2.27000E+07	3.20000E-01
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	34	3.89000E+06	9.17333E-01
75 287 0850	75 293 0850	9	4.64000E+06	2.32800E-01
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		3	2.18300E+07	5.52267E-01
SPRING 1975		7	5.24300E+07	2.10533E+00
SUMMER 1975		29	2.01269E+07	3.04933E+00
FALL 1975		18	4.65736E+07	1.47013E+00
TOTAL 1975		11	1.40961E+08	7.17707E+00

WEIR 106 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	1	5.19000E+06	1.46905E-02
75 013 1520	75 020 1150	2	5.79000E+06	2.21406E-02
75 020 1150	75 027 1340	0	6.34000E+06	0.00000E+00
75 027 1340	75 034 1050	0	4.30000E+06	0.00000E+00
75 034 1050	75 041 1145	12	6.39000E+06	1.25918E-01
75 041 1145	75 049 1120	0	6.28000E+06	0.00000E+00
75 049 1120	75 055 1120	5	3.69000E+06	5.72928E-02
75 055 1120	75 062 1135	2	4.76000E+06	2.48688E-02
75 062 1135	75 069 1120	1	2.68000E+06	7.86988E-03
75 069 1120	75 076 1205	4	1.37000E+07	4.31270E-02
75 076 1205	75 083 1240	19	2.61000E+07	1.97272E-01
75 083 1240	75 090 1130	5	1.09000E+07	5.62434E-02
75 090 1130	75 097 1125	2	6.59000E+06	1.94124E-02
75 097 1125	75 104 1125	0	5.47000E+06	0.00000E+00
75 104 1125	75 111 1105	0	7.82000E+06	0.00000E+00
75 111 1105	75 118 1110	0	1.09000E+07	0.00000E+00
75 118 1110	75 125 1150	0	1.77000E+07	0.00000E+00
75 125 1150	75 132 1055	0	8.35000E+06	0.00000E+00
75 132 1055	75 139 1100	8	8.81000E+06	8.37356E-02
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	0	2.79000E+06	0.00000E+00
75 153 1045	75 160 1055	0	4.53000E+06	0.00000E+00
75 160 1055	75 167 1030	10	4.32000E+06	1.04932E-01
75 167 1030	75 174 1020	25	3.81000E+06	2.62329E-01
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	133	2.37000E+07	1.39559E+00
75 195 1050	75 202 .	13	1.14000E+07	1.37461E-01
75 202 .	75 209 1145	0	2.58000E+06	0.00000E+00
75 209 1145	75 216 1020	39	1.71000E+06	4.08185E-01
75 216 1020	75 223 1055	21	1.37000E+06	2.17209E-01
75 223 1055	75 230 1130	90	5.59000E+06	9.46485E-01
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	9	2.62000E+06	9.06611E-02
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	11	1.72000E+06	1.16474E-01
75 265 1100	75 272 1040	68	5.13000E+07	7.18783E-01
75 272 1040	75 280 0850	5	6.10000E+06	4.92130E-02
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	7	1.01000E+07	7.25079E-02
75 293 0900	75 301 1005	17	6.64000E+06	1.80483E-01
75 301 1005	75 307 0850	0	4.20000E+06	0.00000E+00
75 307 0850	75 314 1250	0	4.12000E+06	0.00000E+00
75 314 1250	75 321 1155	10	1.06000E+07	1.08080E-01
75 321 1155	75 328 1040	0	4.86000E+06	0.00000E+00
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		3	4.27400E+07	2.44911E-01
SPRING 1975		3	1.25340E+08	4.07660E-01
SUMMER 1975		37	6.73110E+07	3.47219E+00
FALL 1975		13	1.15510E+08	1.33620E+00
TOTAL 1975		13	3.50901E+08	5.46097E+00

WEIR 107 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	8	1.08000E+06	2.78014E-01
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	16	2.58000E+06	5.78014E-01
75 013 1600	75 021 1220	4	2.94000E+06	1.25177E-01
75 021 1220	75 027 1020	28	2.34000E+06	9.96454E-01
75 027 1020	75 034 0955	0	1.80000E+06	0.00000E+00
75 034 0955	75 041 1030	6	4.05000E+06	2.30142E-01
75 041 1030	75 049 1025	4	3.04000E+06	1.57447E-01
75 049 1025	75 055 1020	48	1.74000E+06	1.70213E+00
75 055 1020	75 062 1040	.	2.43000E+06	.
75 062 1040	75 069 1000	0	1.45000E+06	0.00000E+00
75 069 1120	75 076 1045	18	6.52000E+06	6.27660E-01
75 076 1045	75 083 1110	21	7.84000E+06	7.37589E-01
75 083 1110	75 090 1030	6	4.25000E+06	2.01773E-01
75 090 1030	75 097 1025	7	3.49000E+06	2.53191E-01
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	0	2.28000E+06	0.00000E+00
75 111 1015	75 118 1005	0	2.40000E+06	0.00000E+00
75 118 1005	75 125 1045	0	4.05000E+06	0.00000E+00
75 125 1045	75 132 1000	0	2.93000E+06	0.00000E+00
75 132 1000	75 139 0950	0	3.73000E+06	0.00000E+00
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	56	1.15000E+06	1.97518E+00
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	0	9.51000E+05	0.00000E+00
75 167 0935	75 174 1107	203	9.19000E+05	7.19858E+00
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	49	4.22000E+06	1.73759E+00
75 195 0955	75 202 1000	31	3.68000E+06	1.08511E+00
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	119	8.28000E+05	4.21986E+00
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	41	.	1.45390E+00
WINTER 1975		14	2.58540E+07	4.06738E+00
SPRING 1975		10	4.37500E+07	3.79539E+00

WEIR 107 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		80	1.65460E+07	1.42411E+01
FALL 1975		41	1.24900E+06	1.45390E+00
TOTAL 1975		27	8.73990E+07	2.35578E+01

WEIR 108 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	5	8.92000E+06	3.03191E-02
74 357 1120	74 364 1110	2	2.57000E+06	1.38298E-02
74 364 1110	75 006 1315	1	3.18000E+06	8.51064E-03
75 006 1315	75 013 1245	0	6.23000E+06	0.00000E+00
75 013 1245	75 020 1110	1	1.15000E+07	9.44149E-03
75 020 1110	75 027 1240	0	1.05000E+07	0.00000E+00
75 027 1240	75 034 1340	0	6.94000E+06	0.00000E+00
75 034 1340	75 041 1340	1	1.27000E+07	7.71277E-03
75 041 1340	75 049 1455	0	1.06000E+07	0.00000E+00
75 049 1455	75 055 1345	1	6.55000E+06	6.91489E-03
75 055 1345	75 062 1340	0	8.26000E+06	0.00000E+00
75 062 1340	75 069 1230	5	5.57000E+06	3.37101E-02
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	27	3.64000E+07	1.82181E-01
75 083 1500	75 090 1405	3	2.49000E+07	1.98138E-02
75 090 1405	75 097 1510	6	1.12000E+07	4.11569E-02
75 097 1510	75 104 1525	0	8.94000E+06	0.00000E+00
75 104 1525	75 111 1530	0	1.20000E+07	0.00000E+00
75 111 1530	75 118 1500	0	1.22000E+07	0.00000E+00
75 118 1500	75 125 1545	30	2.28000E+07	1.98803E-01
75 125 1545	75 132 1545	41	1.93000E+07	2.73936E-01
75 132 1545	75 139 1440	0	1.19000E+07	0.00000E+00
75 139 1440	75 147 1415	0	9.20000E+06	0.00000E+00
75 147 1415	75 153 1630	0	9.92000E+06	0.00000E+00
75 153 1630	75 160 1510	14	6.59000E+06	9.17553E-02
75 160 1510	75 167 1400	9	6.61000E+06	5.77128E-02
75 167 1400	75 174 1300	82	4.48000E+06	5.43883E-01
75 174 1300	75 181 .	114	1.95000E+06	7.57979E-01
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	37	4.57000E+07	2.48005E-01
75 195 1515	75 202 1440	44	2.51000E+07	2.89894E-01
75 202 1440	75 209 1330	107	6.67000E+06	7.11436E-01
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	15	6.27000E+06	9.97340E-02
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	39	1.56000E+06	2.56649E-01
75 237 1345	75 244 1155	13	9.72000E+06	8.57713E-02
75 244 1155	75 251 1325	12	4.44000E+06	7.77926E-02
75 251 1325	75 258 1445	0	1.63000E+06	0.00000E+00
75 258 1445	75 265 1440	25	3.49000E+06	1.66888E-01
75 265 1440	75 272 1415	14	1.14000E+08	9.64096E-02
75 272 1415	75 280 1150	0	1.32000E+07	0.00000E+00
75 280 1150	75 287 1220	12	2.13000E+07	8.11170E-02
75 287 1220	75 293 1145	0	1.72000E+07	0.00000E+00
75 293 1145	75 301 1210	36	1.32000E+07	2.40691E-01

WEIR 108 1975 TOTAL CHROMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	0	8.68000E+06	0.00000E+00
75 307 1320	75 314 1545	0	8.49000E+06	0.00000E+00
75 314 1545	75 322 1255	19	2.23000E+07	1.25665E-01
75 322 1255	75 328 1540	0	8.63000E+06	0.00000E+00
75 328 1540	75 335 1520	0	8.23000E+06	0.00000E+00
WINTER 1975		1	1.01520E+08	7.67287E-02
SPRING 1975		9	2.28430E+08	7.49601E-01
SUMMER 1975		47	1.26513E+08	3.14282E+00
FALL 1975		9	2.44790E+08	7.88564E-01
TOTAL 1975		16	7.01253E+08	4.75771E+00

WEIR 101 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	1	1.39000E+07	3.54139E-03
74 357 1000	74 364 0925	2	4.92000E+06	8.85347E-03
74 364 0925	75 006 1115	1	5.46000E+06	3.54139E-03
75 006 1115	75 013 1100	0	1.23000E+07	1.99203E-03
75 013 1100	75 020 1000	1	1.84000E+07	2.25764E-03
75 020 1000	75 027 1105	0	1.65000E+07	0.00000E+00
75 027 1105	75 034 1145	0	1.18000E+07	0.00000E+00
75 034 1145	75 041 1240	5	2.04000E+07	2.00974E-02
75 041 1240	75 049 1340	0	1.67000E+07	0.00000E+00
75 049 1340	75 055 1205	0	1.02000E+07	0.00000E+00
75 055 1205	75 062 1225	0	1.33000E+07	0.00000E+00
75 062 1225	75 069 1210	0	8.99000E+06	0.00000E+00
75 069 1210	75 076 1320	0	3.25000E+07	0.00000E+00
75 076 1320	75 083 1345	0	5.73000E+07	0.00000E+00
75 083 1340	75 090 1245	0	3.10000E+07	0.00000E+00
75 090 1245	75 097 1215	0	1.74000E+07	0.00000E+00
75 097 1215	75 104 1210	0	1.25000E+07	0.00000E+00
75 104 1210	75 111 1205	0	1.70000E+07	0.00000E+00
75 111 1205	75 118 1205	0	1.86000E+07	0.00000E+00
75 118 1205	75 125 1305	0	3.08000E+07	0.00000E+00
75 125 1305	75 132 1135	0	2.27000E+07	0.00000E+00
75 132 1135	75 139 1150	0	2.22000E+07	0.00000E+00
75 139 1150	75 147 1130	0	1.18000E+07	0.00000E+00
75 147 1130	75 153 1355	0	7.37000E+06	0.00000E+00
75 153 1355	75 160 1150	0	6.23000E+06	0.00000E+00
75 160 1150	75 167 .	2	5.45000E+06	7.25985E-03
75 167 .	75 174 1125	2	6.64000E+06	8.85347E-03
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	6	3.78000E+07	2.69146E-02
75 195 1220	75 202 1140	2	2.82000E+07	8.27800E-03
75 202 1140	75 209 1205	2	8.55000E+06	6.99425E-03
75 209 1205	75 216 1100	2	4.55000E+06	9.20761E-03
75 216 1100	75 223 1130	2	6.08000E+06	1.00487E-02
75 223 1130	75 230 1200	2	1.34000E+07	1.01815E-02
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	3	1.07000E+07	1.33245E-02
75 244 1020	75 251 1130	2	9.93000E+06	9.03054E-03
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	2	5.27000E+06	9.42895E-03
75 265 1150	75 272 1200	0	8.27000E+07	0.00000E+00
75 272 1200	75 280 0925	0	1.84000E+07	0.00000E+00
75 280 0925	75 287 0920	0	2.45000E+07	0.00000E+00
75 287 0920	75 293 0950	0	2.20000E+07	0.00000E+00
75 293 0950	75 301 1040	2	1.71000E+07	8.89774E-03

WEIR 101 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	0	1.12000E+07	0.00000E+00
75 307 1040	75 314 1330	2	1.15000E+07	7.56972E-03
75 314 1330	75 321 0920	0	2.55000E+07	0.00000E+00
75 321 0920	75 328 1150	0	1.34000E+07	0.00000E+00
75 328 1150	75 335 1145	0	1.07000E+07	0.00000E+00
WINTER 1975		1	1.60080E+08	4.02833E-02
SPRING 1975		0	2.90160E+08	0.00000E+00
SUMMER 1975		2	1.34624E+08	1.01062E-01
FALL 1975		1	2.55920E+08	3.49270E-02
TOTAL 1975		1	8.40784E+08	1.76273E-01

WEIR 102 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	1	1.27000E+07	4.23775E+04
74 357 1020	74 364 1015	1	5.23000E+06	2.83587E+04
74 364 1025	75 006 1140	1	4.35000E+06	2.90302E+04
75 006 1140	75 013 1125	1	1.12000E+07	4.32117E+04
75 013 1125	75 020 1020	1	1.78000E+07	6.03233E+04
75 020 1020	75 027 1135	4	1.78000E+07	3.61940E+05
75 027 1135	75 034 1205	0	1.05000E+07	0.00000E+00
75 034 1255	75 041 1300	0	1.92000E+07	0.00000E+00
75 041 1300	75 049 1350	0	1.54000E+07	0.00000E+00
75 049 1350	75 055 1220	2	9.00000E+06	1.02294E+05
75 055 1220	75 062 1240	0	1.16000E+07	0.00000E+00
75 062 1240	75 069 1415	0	6.64000E+06	0.00000E+00
75 069 1415	75 076 1330	0	3.18000E+07	0.00000E+00
75 076 1330	75 083 1400	0	6.04000E+07	0.00000E+00
75 083 1400	75 090 1300	0	2.56000E+07	0.00000E+00
75 090 1300	75 097 1240	0	1.34000E+07	0.00000E+00
75 097 1240	75 104 1225	0	9.38000E+06	0.00000E+00
75 104 1225	75 111 1225	0	1.36000E+07	0.00000E+00
75 111 1225	75 118 1225	0	1.55000E+07	0.00000E+00
75 118 1225	75 125 1320	0	2.88000E+07	0.00000E+00
75 125 1320	75 132 1150	0	2.09000E+07	0.00000E+00
75 132 1150	75 139 1205	0	2.03000E+07	0.00000E+00
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	0	5.75000E+06	0.00000E+00
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	3	5.84000E+06	8.58644E+04
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	3	4.92000E+07	7.15683E+05
75 195 1240	75 202 1200	1	2.68000E+07	1.74661E+05
75 202 1200	75 209 1245	2	6.30000E+06	5.09124E+04
75 209 1245	75 216 1115	2	4.15000E+06	3.65667E+04
75 216 1115	75 223 1140	2	3.90000E+06	4.06674E+04
75 223 1140	75 230 1220	3	1.73000E+07	2.25495E+05
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	.	7.60000E+06	.
75 251 1145	75 258 1200	2	2.58000E+06	2.74411E+04
75 258 1200	75 265 1205	2	3.69000E+06	4.50188E+04
75 265 1205	75 272 1230	0	9.24000E+07	0.00000E+00
75 272 1230	75 280 0940	0	1.26000E+07	0.00000E+00
75 280 0940	75 287 0940	0	1.89000E+07	0.00000E+00
75 287 0940	75 293 1010	0	1.68000E+07	0.00000E+00
75 293 1010	75 301 1055	2	1.26000E+07	1.11679E+05

WEIR 102 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	1	8.76000E+06	6.02878E+04
75 307 1050	75 314 1345	2	7.61000E+06	7.45923E+04
75 314 1345	75 321 0940	0	2.33000E+07	0.00000E+00
75 321 0940	75 328 1205	2	1.09000E+07	9.26330E+04
75 328 1205	75 335 1200	0	8.14000E+06	0.00000E+00
WINTER 1975		1	1.55920E+08	6.67535E+05
SPRING 1975		0	2.60980E+08	0.00000E+00
SUMMER 1975		2	1.35380E+08	1.32985E+06
FALL 1975		1	2.25380E+08	4.11652E+05
TOTAL 1975		1	7.71520E+08	2.40904E+06

WEIR 103 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	1	8.10000E+06	4.73186E-03
74 357 1050	74 364 1040	1	2.80000E+06	4.10095E-03
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	1	1.02000E+07	3.39117E-03
75 013 1200	75 020 1040	1	1.71000E+07	4.88959F-03
75 020 1040	75 027 1155	0	1.65000E+07	0.00000E+00
75 027 1155	75 034 1400	0	9.57000E+06	0.00000E+00
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	0	1.64000E+07	0.00000E+00
75 049 1600	75 055 1425	0	1.01000E+07	0.00000E+00
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	0	8.10000E+06	0.00000E+00
75 069 1355	75 076 1600	0	3.77000E+07	0.00000E+00
75 076 1600	75 083 1545	0	6.80000E+07	0.00000E+00
75 083 1545	75 090 1350	0	3.23000E+07	0.00000E+00
75 090 1350	75 097 1540	0	1.87000E+07	0.00000E+00
75 097 1540	75 104 1540	0	1.34000E+07	0.00000E+00
75 104 1540	75 111 1555	0	1.92000E+07	0.00000E+00
75 111 1555	75 118 1540	0	2.29000E+07	0.00000E+00
75 118 1540	75 125 1615	0	3.86000E+07	0.00000E+00
75 125 1615	75 132 1610	0	3.02000E+07	0.00000E+00
75 132 1610	75 139 1515	0	2.99000E+07	0.00000E+00
75 139 1515	75 147 .	0	1.48000E+07	0.00000E+00
75 147 1435	75 153 1705	0	1.01000E+07	0.00000E+00
75 153 1705	75 160 1540	0	7.29000E+06	0.00000E+00
75 160 1540	75 167 1505	2	6.65000E+06	6.74290E-03
75 167 1505	75 174 1245	4	1.25000E+07	1.58912E-02
75 174 1245	75 181 .	1	2.13000E+06	4.25868E-03
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	3	4.75000E+07	1.30126E-02
75 195 1600	75 202 1515	1	2.91000E+07	5.55994E-03
75 202 1515	75 209 1400	2	7.22000E+06	6.90063E-03
75 209 1400	75 216 .	2	3.15000E+06	8.59621E-03
75 216 .	75 223 1450	3	4.09000E+06	1.04101E-02
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	2	7.61000E+06	7.64984E-03
75 239 1040	75 244 1220	3	5.51000E+06	1.31309E-02
75 244 1220	75 251 1415	2	4.30000E+06	8.43849E-03
75 251 1500	75 258 1500	2	2.32000E+06	7.01893E-03
75 258 1500	75 265 1500	2	3.03000E+06	6.30915E-03
75 265 1500	75 272 1445	0	8.88000E+07	0.00000F+00
75 272 1445	75 280 1220	0	1.65000E+07	0.00000F+00
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	0	1.28000E+07	0.00000E+00
75 328 1600	75 335 1555	0	1.23000E+07	0.00000E+00
WINTER 1975		1	1.37330E+08	1.71136E-02
SPRING 1975		0	3.43900E+08	0.00000E+00
SUMMER 1975		2	1.44642E+08	9.21530E-02
FALL 1975		1	2.53650E+08	2.17666E-02
TOTAL 1975		1	8.79522E+08	1.31033E-01

WEIR 105 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	0	2.15000E+06	1.30667E-02
75 013 1500	75 020 1150	1	3.43000E+06	1.41333E-02
75 020 1140	75 027 1320	0	3.41000E+06	0.00000E+00
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	0	3.92000E+06	0.00000E+00
75 041 1130	75 049 1100	0	2.94000E+06	0.00000E+00
75 049 1100	75 055 1100	0	1.74000E+06	0.00000E+00
75 055 1100	75 062 1120	0	2.33000E+06	0.00000E+00
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	0	6.44000E+06	0.00000E+00
75 076 1150	75 083 1220	0	1.22000E+07	0.00000E+00
75 083 1220	75 090 1110	0	5.53000E+06	0.00000E+00
75 090 1110	75 097 1110	0	2.83000E+06	0.00000E+00
75 097 1110	75 104 1105	0	1.82000E+06	0.00000E+00
75 104 1105	75 111 1050	0	2.65000E+06	0.00000E+00
75 111 1050	75 118 1100	0	3.19000E+06	0.00000E+00
75 118 1100	75 125 1130	0	5.68000E+06	0.00000E+00
75 125 1130	75 132 1040	0	3.77000E+06	0.00000E+00
75 132 1040	75 139 1040	0	4.08000E+06	0.00000E+00
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	0	1.08000E+06	0.00000E+00
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	2	2.88000E+05	4.42667E-02
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	2	8.64000E+06	4.58667E-02
75 195 1040	75 202 1030	1	4.77000E+06	3.89333E-02
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	3	1.50000E+06	8.05333E-02
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	0	2.27000E+07	0.00000E+00
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	0	3.89000E+06	0.00000E+00
75 287 0850	75 293 0850	2	4.64000E+06	6.48000E-02
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR105 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		0	2.18300E+07	2.72000E-02
SPRING 1975		0	5.24300E+07	0.00000E+00
SUMMER 1975		2	2.01269E+07	2.09600E-01
FALL 1975		1	4.65736E+07	6.48000E-02
TOTAL 1975		0	1.40961E+08	3.01600E-01

WEIR 106 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	0	5.19000E+06	3.35782E-03
75 013 1520	75 020 1150	0	5.79000E+06	5.14166E-03
75 020 1150	75 027 1340	0	6.34000E+06	0.00000E+00
75 027 1340	75 034 1050	0	4.30000E+06	0.00000E+00
75 034 1050	75 041 1145	0	6.39000E+06	0.00000E+00
75 041 1145	75 049 1120	0	6.28000E+06	0.00000E+00
75 049 1120	75 055 1120	0	3.69000E+06	0.00000E+00
75 055 1120	75 062 1135	0	4.76000E+06	0.00000E+00
75 062 1135	75 069 1120	0	2.68000E+06	0.00000E+00
75 069 1120	75 076 1205	0	1.37000E+07	0.00000E+00
75 076 1205	75 083 1240	0	2.61000E+07	0.00000E+00
75 083 1240	75 090 1130	0	1.09000E+07	0.00000E+00
75 090 1130	75 097 1125	0	6.59000E+06	0.00000E+00
75 097 1125	75 104 1125	0	5.47000E+06	0.00000E+00
75 104 1125	75 111 1105	0	7.82000E+06	0.00000E+00
75 111 1105	75 118 1110	0	1.09000E+07	0.00000E+00
75 118 1110	75 125 1150	0	1.77000E+07	0.00000E+00
75 125 1150	75 132 1055	0	8.35000E+06	0.00000E+00
75 132 1055	75 139 1100	0	8.81000E+06	0.00000E+00
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	0	2.79000E+06	0.00000E+00
75 153 1045	75 160 1055	0	4.53000E+06	0.00000E+00
75 160 1055	75 167 1030	1	4.32000E+06	1.36411E-02
75 167 1030	75 174 1020	2	3.81000E+06	2.54984E-02
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	4	2.37000E+07	4.19727E-02
75 195 1050	75 202 .	2	1.14000E+07	1.78384E-02
75 202 .	75 209 1145	2	2.58000E+06	1.93075E-02
75 209 1145	75 216 1020	3	1.71000E+06	2.82267E-02
75 216 1020	75 223 1055	2	1.37000E+06	2.11962E-02
75 223 1055	75 230 1130	4	5.59000E+06	3.67261E-02
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	4	2.62000E+06	4.11333E-02
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	2	1.72000E+06	2.32949E-02
75 265 1100	75 272 1040	0	5.13000E+07	0.00000E+00
75 272 1040	75 280 0850	0	6.10000E+06	0.00000E+00
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	0	1.01000E+07	0.00000E+00
75 293 0900	75 301 1005	0	6.64000E+06	0.00000E+00
75 301 1005	75 307 0850	0	4.20000E+06	0.00000E+00
75 307 0850	75 314 1250	0	4.12000E+06	0.00000E+00
75 314 1250	75 321 1155	2	1.06000E+07	1.72088E-02
75 321 1155	75 328 1040	0	4.86000E+06	0.00000E+00
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		0	4.27400E+07	8.49948E-03
SPRING 1975		0	1.25340E+08	0.00000E+00
SUMMER 1975		2	6.73110E+07	2.04407E-01
FALL 1975		1	1.15510E+08	8.16369E-02
TOTAL 1975		1	3.50901E+08	2.94544E-01

WEIR 107 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	1	1.08000E+06	2.83688E-02
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	0	2.58000E+06	1.27660E-02
75 013 1600	75 021 1220	0	2.94000E+06	1.52482E-02
75 021 1220	75 027 1020	0	2.34000E+06	0.00000E+00
75 027 1020	75 034 0955	0	1.80000E+06	0.00000E+00
75 034 0955	75 041 1030	0	4.05000E+06	0.00000E+00
75 041 1030	75 049 1025	0	3.04000E+06	0.00000E+00
75 049 1025	75 055 1020	0	1.74000E+06	0.00000E+00
75 055 1020	75 062 1040	0	2.43000E+06	0.00000E+00
75 062 1040	75 069 1000	0	1.45000E+06	0.00000E+00
75 069 1120	75 076 1045	0	6.52000E+06	0.00000E+00
75 076 1045	75 083 1110	0	7.84000E+06	0.00000E+00
75 083 1110	75 090 1030	0	4.25000E+06	0.00000E+00
75 090 1030	75 097 1025	0	3.49000E+06	0.00000E+00
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	0	2.28000E+06	0.00000E+00
75 111 1015	75 118 1005	0	2.40000E+06	0.00000E+00
75 118 1005	75 125 1045	0	4.05000E+06	0.00000E+00
75 125 1045	75 132 1000	0	2.93000E+06	0.00000E+00
75 132 1000	75 139 0950	0	3.73000E+06	0.00000E+00
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	0	1.15000E+06	0.00000E+00
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	1	9.51000E+05	5.17730E-02
75 167 0935	75 174 1107	8	9.19000E+05	2.80142E-01
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	2	4.22000E+06	7.58865E-02
75 195 0955	75 202 1000	2	3.68000E+06	5.81560E-02
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	5	8.28000E+05	1.84043E-01
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	0	.	0.00000E+00
WINTER 1975		0	2.58540E+07	5.63830E-02
SPRING 1975		0	4.37500E+07	0.00000E+00

WEIR 107 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		4	1.65460E+07	6.50000E-01
FALL 1975		0	1.24900E+06	0.00000E+00
TOTAL 1975		1	8.73990E+07	7.06383E-01

WEIR 108 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	1	8.92000E+06	6.91489E-03
74 357 1120	74 364 1110	1	2.57000E+06	9.57447E-03
74 364 1110	75 006 1315	1	3.18000E+06	6.38298E-03
75 006 1315	75 013 1245	1	6.23000E+06	6.25000E-03
75 013 1245	75 020 1110	1	1.15000E+07	5.91755E-03
75 020 1110	75 027 1240	4	1.05000E+07	2.59309E-02
75 027 1240	75 034 1340	0	6.94000E+06	0.00000E+00
75 034 1340	75 041 1340	0	1.27000E+07	0.00000E+00
75 041 1340	75 049 1455	.	1.06000E+07	.
75 049 1455	75 055 1345	0	6.55000E+06	0.00000E+00
75 055 1345	75 062 1340	0	8.26000E+06	0.00000E+00
75 062 1340	75 069 1230	3	5.57000E+06	1.74202E-02
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	0	3.64000E+07	0.00000E+00
75 083 1500	75 090 1405	0	2.49000E+07	0.00000E+00
75 090 1405	75 097 1510	0	1.12000E+07	0.00000E+00
75 097 1510	75 104 1525	0	8.94000E+06	0.00000E+00
75 104 1525	75 111 1530	0	1.20000E+07	0.00000E+00
75 111 1530	75 118 1500	0	1.22000E+07	0.00000E+00
75 118 1500	75 125 1545	0	2.28000E+07	0.00000E+00
75 125 1545	75 132 1545	0	1.93000E+07	0.00000E+00
75 132 1545	75 139 1440	0	1.19000E+07	0.00000E+00
75 139 1440	75 147 1415	0	9.20000E+06	0.00000E+00
75 147 1415	75 153 1630	0	9.92000E+06	0.00000E+00
75 153 1630	75 160 1510	0	6.59000E+06	0.00000E+00
75 160 1510	75 167 1400	2	6.61000E+06	1.15691E-02
75 167 1400	75 174 1300	3	4.48000E+06	1.73537E-02
75 174 1300	75 181 .	2	1.95000E+06	1.09707E-02
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	2	4.57000E+07	1.34309E-02
75 195 1515	75 202 1440	2	2.51000E+07	1.21676E-02
75 202 1440	75 209 1330	2	6.67000E+06	1.15691E-02
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	3	6.27000E+06	1.66223E-02
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	2	1.56000E+06	1.26330E-02
75 237 1345	75 244 1155	3	9.72000E+06	1.71543E-02
75 244 1155	75 251 1325	2	4.44000E+06	1.55585E-02
75 251 1325	75 258 1445	2	1.63000E+06	1.11037E-02
75 258 1445	75 265 1440	2	3.49000E+06	1.15691E-02
75 265 1440	75 272 1415	0	1.14000E+08	0.00000E+00
75 272 1415	75 280 1150	0	1.32000E+07	0.00000E+00
75 280 1150	75 287 1220	0	2.13000E+07	0.00000E+00
75 287 1220	75 293 1145	0	1.72000E+07	0.00000E+00
75 293 1145	75 301 1210	0	1.32000E+07	0.00000E+00

WEIR 108 1975 TOTAL CADMIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	2	8.68000E+06	1.23670E-02
75 307 1320	75 314 1545	0	8.49000E+06	0.00000E+00
75 314 1545	75 322 1255	0	2.23000E+07	0.00000E+00
75 322 1255	75 328 1540	2	8.63000E+06	1.06383E-02
75 328 1540	75 335 1520	0	8.23000E+06	0.00000E+00
WINTER 1975		1	1.01520E+08	6.09707E-02
SPRING 1975		0	2.28430E+08	1.74202E-02
SUMMER 1975		2	1.26513E+08	1.23471E-01
FALL 1975		1	2.44790E+08	6.12367E-02
TOTAL 1975		1	7.01253E+08	2.63098E-01

WEIR 101 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	2	1.39000E+07	7.08278E-03
74 357 1000	74 364 0925	1	4.92000E+06	2.83311E-03
74 364 0925	75 006 1115	0	5.46000E+06	1.06242E-03
75 006 1115	75 013 1100	1	1.23000E+07	2.78884E-03
75 013 1100	75 020 1000	1	1.84000E+07	4.51527E-03
75 020 1000	75 027 1105	0	1.65000E+07	0.00000E+00
75 027 1105	75 034 1145	0	1.18000E+07	0.00000E+00
75 034 1145	75 041 1240	0	2.04000E+07	0.00000E+00
75 041 1240	75 049 1340	0	1.67000E+07	0.00000E+00
75 049 1340	75 055 1205	0	1.02000E+07	0.00000E+00
75 055 1205	75 062 1225	0	1.33000E+07	0.00000E+00
75 062 1225	75 069 1210	3	8.99000E+06	1.35458E-02
75 069 1210	75 076 1320	5	3.25000E+07	2.02302E-02
75 076 1320	75 083 1345	8	5.73000E+07	3.53696E-02
75 083 1340	75 090 1245	8	3.10000E+07	3.54139E-02
75 090 1245	75 097 1215	8	1.74000E+07	3.38645E-02
75 097 1215	75 104 1210	0	1.25000E+07	0.00000E+00
75 104 1210	75 111 1205	0	1.70000E+07	0.00000E+00
75 111 1205	75 118 1205	0	1.86000E+07	0.00000E+00
75 118 1205	75 125 1305	0	3.08000E+07	0.00000E+00
75 125 1305	75 132 1135	0	2.27000E+07	0.00000E+00
75 132 1135	75 139 1150	0	2.22000E+07	0.00000E+00
75 139 1150	75 147 1130	0	1.18000E+07	0.00000E+00
75 147 1130	75 153 1355	0	7.37000E+06	0.00000E+00
75 153 1355	75 160 1150	0	6.23000E+06	0.00000E+00
75 160 1150	75 167 .	0	5.45000E+06	0.00000E+00
75 167 .	75 174 1125	0	6.64000E+06	0.00000E+00
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	13	3.78000E+07	5.97610E-02
75 195 1220	75 202 1140	1	2.82000E+07	6.55157E-03
75 202 1140	75 209 1205	0	8.55000E+06	0.00000E+00
75 209 1205	75 216 1100	0	4.55000E+06	0.00000E+00
75 216 1100	75 223 1130	2	6.08000E+06	8.98628E-03
75 223 1130	75 230 1200	3	1.34000E+07	1.39000E-02
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	0	1.07000E+07	0.00000E+00
75 244 1020	75 251 1130	0	9.93000E+06	0.00000E+00
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	0	5.27000E+06	0.00000E+00
75 265 1150	75 272 1200	11	8.27000E+07	4.73661E-02
75 272 1200	75 280 0925	0	1.84000E+07	0.00000E+00
75 280 0925	75 287 0920	6	2.45000E+07	2.50996E-02
75 287 0920	75 293 0950	4	2.20000E+07	1.54936E-02
75 293 0950	75 301 1040	0	1.71000E+07	0.00000E+00

WEIR 101 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	0	1.12000E+07	0.00000E+00
75 307 1040	75 314 1330	4	1.15000E+07	1.62461E-02
75 314 1330	75 321 0920	6	2.55000E+07	2.59407E-02
75 321 0920	75 328 1150	0	1.34000E+07	0.00000E+00
75 328 1150	75 335 1145	0	1.07000E+07	0.00000E+00
WINTER 1975		0	1.60080E+08	1.82824E-02
SPRING 1975		2	2.90160E+08	1.38424E-01
SUMMER 1975		2	1.34624E+08	8.91988E-02
FALL 1975		2	2.55920E+08	1.30146E-01
TOTAL 1975		2	8.40784E+08	3.76051E-01

WEIR 102 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	3	1.27000E+07	1.85401E+05
74 357 1020	74 364 1015	16	5.23000E+06	4.36288E+05
74 364 1025	75 006 1140	9	4.35000E+06	1.95954E+05
75 006 1140	75 013 1125	1	1.12000E+07	6.07299E+04
75 013 1125	75 020 1020	1	1.78000E+07	1.20647E+05
75 020 1020	75 027 1135	0	1.78000E+07	0.00000E+00
75 027 1135	75 034 1205	0	1.05000E+07	0.00000E+00
75 034 1255	75 041 1300	4	1.92000E+07	3.78394E+05
75 041 1300	75 049 1350	0	1.54000E+07	0.00000E+00
75 049 1350	75 055 1220	0	9.00000E+06	0.00000E+00
75 055 1220	75 062 1240	1	1.16000E+07	5.86653E+04
75 062 1240	75 069 1415	0	6.64000E+06	0.00000E+00
75 069 1415	75 076 1330	3	3.18000E+07	4.19468E+05
75 076 1330	75 083 1400	7	6.04000E+07	2.06267E+06
75 083 1400	75 090 1300	8	2.56000E+07	1.06377E+06
75 090 1300	75 097 1240	8	1.34000E+07	5.79176E+05
75 097 1240	75 104 1225	0	9.38000E+06	0.00000E+00
75 104 1225	75 111 1225	0	1.36000E+07	0.00000E+00
75 111 1225	75 118 1225	0	1.55000E+07	0.00000E+00
75 118 1225	75 125 1320	0	2.88000E+07	0.00000E+00
75 125 1320	75 132 1150	0	2.09000E+07	0.00000E+00
75 132 1150	75 139 1205	0	2.03000E+07	0.00000E+00
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	0	5.75000E+06	0.00000E+00
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	6	5.84000E+06	1.84213E+05
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	0	4.92000E+07	0.00000E+00
75 195 1240	75 202 1200	0	2.68000E+07	0.00000E+00
75 202 1200	75 209 1245	0	6.30000E+06	0.00000E+00
75 209 1245	75 216 1115	0	4.15000E+06	0.00000E+00
75 216 1115	75 223 1140	0	3.90000E+06	0.00000E+00
75 223 1140	75 230 1220	3	1.73000E+07	2.57065E+05
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	0	7.60000E+06	0.00000E+00
75 251 1145	75 258 1200	0	2.58000E+06	0.00000E+00
75 258 1200	75 265 1205	0	3.69000E+06	0.00000E+00
75 265 1205	75 272 1230	0	9.24000E+07	0.00000E+00
75 272 1230	75 280 0940	3	1.26000E+07	1.85912E+05
75 280 0940	75 287 0940	0	1.89000E+07	0.00000E+00
75 287 0940	75 293 1010	0	1.68000E+07	0.00000E+00
75 293 1010	75 301 1055	0	1.26000E+07	0.00000E+00

WEIR 102 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	0	8.76000E+06	0.00000E+00
75 307 1050	75 314 1345	4	7.61000E+06	1.60294E+05
75 314 1345	75 321 0940	7	2.33000E+07	9.08676E+05
75 321 0940	75 328 1205	4	1.09000E+07	1.98905E+05
75 328 1205	75 335 1200	2	8.14000E+06	1.01432E+05
WINTER 1975		3	1.55920E+08	1.43608E+06
SPRING 1975		2	2.60980E+08	4.12509E+06
SUMMER 1975		1	1.35380E+08	4.41277E+05
FALL 1975		2	2.25880E+08	1.55522E+06
TOTAL 1975		2	7.71520E+08	7.55766E+06

WEIR 103 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	3	8.10000E+06	1.04101E-02
74 357 1050	74 364 1040	1	2.80000E+06	2.52366E-03
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	0	1.02000E+07	1.02524E-03
75 013 1200	75 020 1040	1	1.71000E+07	3.90379E-03
75 020 1040	75 027 1155	0	1.65000E+07	0.00000E+00
75 027 1155	75 034 1400	0	9.57000E+06	0.00000E+00
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	0	1.64000E+07	0.00000E+00
75 049 1600	75 055 1425	0	1.01000E+07	0.00000E+00
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	2	8.10000E+06	8.55678E-03
75 069 1355	75 076 1600	1	3.77000E+07	4.61356E-03
75 076 1600	75 083 1545	5	6.80000E+07	1.94401E-02
75 083 1545	75 090 1350	8	3.23000E+07	3.27681E-02
75 090 1350	75 097 1540	8	1.87000E+07	3.02445E-02
75 097 1540	75 104 1540	0	1.34000E+07	0.00000E+00
75 104 1540	75 111 1555	0	1.92000E+07	0.00000E+00
75 111 1555	75 118 1540	0	2.29000E+07	0.00000E+00
75 118 1540	75 125 1615	0	3.86000E+07	0.00000E+00
75 125 1615	75 132 1610	0	3.02000E+07	0.00000E+00
75 132 1610	75 139 1515	0	2.99000E+07	0.00000E+00
75 139 1515	75 147 .	0	1.48000E+07	0.00000E+00
75 147 1435	75 153 1705	0	1.01000E+07	0.00000E+00
75 153 1705	75 160 1540	0	7.29000E+06	0.00000E+00
75 160 1540	75 167 1505	1	6.65000E+06	4.96845E-03
75 167 1505	75 174 1245	11	1.25000E+07	4.17981E-02
75 174 1245	75 181 .	0	2.13000E+06	0.00000E+00
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	3	4.75000E+07	1.22634E-02
75 195 1600	75 202 1515	0	2.91000E+07	0.00000E+00
75 202 1515	75 209 1400	0	7.22000E+06	0.00000E+00
75 209 1400	75 216 .	0	3.15000E+06	0.00000E+00
75 216 .	75 223 1450	0	4.09000E+06	0.00000E+00
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	0	7.61000E+06	0.00000E+00
75 239 1040	75 244 1220	0	5.51000E+06	0.00000E+00
75 244 1220	75 251 1415	0	4.30000E+06	0.00000E+00
75 251 1500	75 258 1500	0	2.32000E+06	0.00000E+00
75 258 1500	75 265 1500	0	3.03000E+06	0.00000E+00
75 265 1500	75 272 1445	7	8.88000E+07	2.80363E-02
75 272 1445	75 280 1220	0	1.65000E+07	0.00000E+00
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	0	1.28000E+07	0.00000E+00
75 328 1600	75 335 1555	0	1.23000E+07	0.00000E+00
WINTER 1975		1	1.37330E+08	1.78628E-02
SPRING 1975		2	3.43900E+08	9.56230E-02
SUMMER 1975		1	1.44642E+08	5.90300E-02
FALL 1975		1	2.53650E+08	2.80363E-02
TOTAL 1975		1	8.79522E+08	2.00552E-01

WEIR 105 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	4	2.15000E+06	1.07467E-01
75 013 1500	75 020 1150	0	3.43000E+06	9.33333E-03
75 020 1140	75 027 1320	0	3.41000E+06	0.00000E+00
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	0	3.92000E+06	0.00000E+00
75 041 1130	75 049 1100	0	2.94000E+06	0.00000E+00
75 049 1100	75 055 1100	0	1.74000E+06	0.00000E+00
75 055 1100	75 062 1120	0	2.33000E+06	0.00000E+00
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	2	6.44000E+06	4.50667E-02
75 076 1150	75 083 1220	6	1.22000E+07	1.66400E-01
75 083 1220	75 090 1110	8	5.53000E+06	2.10400E-01
75 090 1110	75 097 1110	4	2.83000E+06	1.01867E-01
75 097 1110	75 104 1105	0	1.82000E+06	0.00000E+00
75 104 1105	75 111 1050	0	2.65000E+06	0.00000E+00
75 111 1050	75 118 1100	0	3.19000E+06	0.00000E+00
75 118 1100	75 125 1130	0	5.68000E+06	0.00000E+00
75 125 1130	75 132 1040	0	3.77000E+06	0.00000E+00
75 132 1040	75 139 1040	0	4.08000E+06	0.00000E+00
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	0	1.08000E+06	0.00000E+00
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	0	2.88000E+05	0.00000E+00
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	4	8.64000E+06	9.73333E-02
75 195 1040	75 202 1030	0	4.77000E+06	0.00000E+00
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	5	1.50000E+06	1.33867E-01
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	7	2.27000E+07	1.78400E-01
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	0	3.89000E+06	0.00000E+00
75 287 0850	75 293 0850	5	4.64000E+06	1.39200E-01
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		1	2.18300E+07	1.16800E-01
SPRING 1975		2	5.24300E+07	5.23733E-01
SUMMER 1975		2	2.01269E+07	2.31200E-01
FALL 1975		4	4.65736E+07	3.17600E-01
TOTAL 1975		2	1.40961E+08	1.18933E+00

WEIR 106 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	1	5.19000E+06	5.66632E-03
75 013 1520	75 020 1150	1	5.79000E+06	8.49948E-03
75 020 1150	75 027 1340	0	6.34000E+06	0.00000E+00
75 027 1340	75 034 1050	0	4.30000E+06	0.00000E+00
75 034 1050	75 041 1145	0	6.39000E+06	0.00000E+00
75 041 1145	75 049 1120	0	6.28000E+06	0.00000E+00
75 049 1120	75 055 1120	0	3.69000E+06	0.00000E+00
75 055 1120	75 062 1135	0	4.76000E+06	0.00000E+00
75 062 1135	75 069 1120	1	2.68000E+06	6.40084E-03
75 069 1120	75 076 1205	4	1.37000E+07	3.85100E-02
75 076 1205	75 083 1240	9	2.61000E+07	9.81112E-02
75 083 1240	75 090 1130	7	1.09000E+07	6.99895E-02
75 090 1130	75 097 1125	8	6.59000E+06	8.47849E-02
75 097 1125	75 104 1125	0	5.47000E+06	0.00000E+00
75 104 1125	75 111 1105	0	7.82000E+06	0.00000E+00
75 111 1105	75 118 1110	0	1.09000E+07	0.00000E+00
75 118 1110	75 125 1150	0	1.77000E+07	0.00000E+00
75 125 1150	75 132 1055	0	8.35000E+06	0.00000E+00
75 132 1055	75 139 1100	0	8.81000E+06	0.00000E+00
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	0	2.79000E+06	0.00000E+00
75 153 1045	75 160 1055	0	4.53000E+06	0.00000E+00
75 160 1055	75 167 1030	0	4.32000E+06	0.00000E+00
75 167 1030	75 174 1020	4	3.81000E+06	3.91396E-02
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	14	2.37000E+07	1.51102E-01
75 195 1050	75 202 .	0	1.14000E+07	0.00000E+00
75 202 .	75 209 1145	0	2.58000E+06	0.00000E+00
75 209 1145	75 216 1020	4	1.71000E+06	4.67996E-02
75 216 1020	75 223 1055	0	1.37000E+06	0.00000E+00
75 223 1055	75 230 1130	8	5.59000E+06	8.14271E-02
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	5	2.62000E+06	5.62434E-02
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	5	1.72000E+06	5.16264E-02
75 265 1100	75 272 1040	10	5.13000E+07	1.02204E-01
75 272 1040	75 280 0850	3	6.10000E+06	2.94858E-02
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	0	1.01000E+07	0.00000E+00
75 293 0900	75 301 1005	5	6.64000E+06	5.43547E-02
75 301 1005	75 307 0850	0	4.20000E+06	0.00000E+00
75 307 0850	75 314 1250	4	4.12000E+06	3.96642E-02
75 314 1250	75 321 1155	6	1.06000E+07	6.03358E-02
75 321 1155	75 328 1040	3	4.86000E+06	3.28437E-02
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		0	4.27400E+07	1.41658E-02
SPRING 1975		2	1.25340E+08	2.97796E-01
SUMMER 1975		3	6.73110E+07	3.18468E-01
FALL 1975		4	1.15510E+08	4.26758E-01
TOTAL 1975		3	3.50901E+08	1.05719E+00

WEIR 107 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	1	1.08000E+06	4.53901E-02
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	5	2.58000E+06	1.59574E-01
75 013 1600	75 021 1220	2	2.94000E+06	6.09929E-02
75 021 1220	75 027 1020	0	2.34000E+06	0.00000E+00
75 027 1020	75 034 0955	0	1.80000E+06	0.00000E+00
75 034 0955	75 041 1030	0	4.05000E+06	0.00000E+00
75 041 1030	75 049 1025	0	3.04000E+06	0.00000E+00
75 049 1025	75 055 1020	0	1.74000E+06	0.00000E+00
75 055 1020	75 062 1040	0	2.43000E+06	0.00000E+00
75 062 1040	75 069 1000	2	1.45000E+06	6.63121E-02
75 069 1120	75 076 1045	0	6.52000E+06	0.00000E+00
75 076 1045	75 083 1110	8	7.84000E+06	2.99291E-01
75 083 1110	75 090 1030	8	4.25000E+06	2.71631E-01
75 090 1030	75 097 1025	8	3.49000E+06	2.80142E-01
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	0	2.28000E+06	0.00000E+00
75 111 1015	75 118 1005	0	2.40000E+06	0.00000E+00
75 118 1005	75 125 1045	0	4.05000E+06	0.00000E+00
75 125 1045	75 132 1000	0	2.93000E+06	0.00000E+00
75 132 1000	75 139 0950	0	3.73000E+06	0.00000E+00
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	0	1.15000E+06	0.00000E+00
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	0	9.51000E+05	0.00000E+00
75 167 0935	75 174 1107	33	9.19000E+05	1.17730E+00
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	6	4.22000E+06	2.04610E-01
75 195 0955	75 202 1000	4	3.68000E+06	1.56383E-01
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	14	8.28000E+05	4.96454E-01
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	8	.	3.00355E-01
	WINTER 1975	1	2.58540E+07	2.65957E-01
	SPRING 1975	2	4.37500E+07	9.17376E-01

WEIR 107 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		11	1.65460E+07	2.03475E+00
FALL 1975		8	1.24900E+06	3.00355E-01
TOTAL 1975		4	8.73990E+07	3.51844E+00

WEIR 108 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	3	8.92000E+06	1.75532E-02
74 357 1120	74 364 1110	5	2.57000E+06	3.56383E-02
74 364 1110	75 006 1315	1	3.18000E+06	4.25532E-03
75 006 1315	75 013 1245	1	6.23000E+06	4.38830E-03
75 013 1245	75 020 1110	1	1.15000E+07	5.91755E-03
75 020 1110	75 027 1240	0	1.05000E+07	0.00000E+00
75 027 1240	75 034 1340	0	6.94000E+06	0.00000E+00
75 034 1340	75 041 1340	2	1.27000E+07	1.44282E-02
75 041 1340	75 049 1455	0	1.06000E+07	0.00000E+00
75 049 1455	75 055 1345	0	6.55000E+06	0.00000E+00
75 055 1345	75 062 1340	9	8.26000E+06	6.09707E-02
75 062 1340	75 069 1230	3	5.57000E+06	1.74202E-02
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	4	3.64000E+07	2.83910E-02
75 083 1500	75 090 1405	7	2.49000E+07	4.83378E-02
75 090 1405	75 097 1510	10	1.12000E+07	6.71543E-02
75 097 1510	75 104 1525	0	8.94000E+06	0.00000E+00
75 104 1525	75 111 1530	0	1.20000E+07	0.00000E+00
75 111 1530	75 118 1500	0	1.22000E+07	0.00000E+00
75 118 1500	75 125 1545	0	2.28000E+07	0.00000E+00
75 125 1545	75 132 1545	0	1.93000E+07	0.00000E+00
75 132 1545	75 139 1440	0	1.19000E+07	0.00000E+00
75 139 1440	75 147 1415	0	9.20000E+06	0.00000E+00
75 147 1415	75 153 1630	0	9.92000E+06	0.00000E+00
75 153 1630	75 160 1510	0	6.59000E+06	0.00000E+00
75 160 1510	75 167 1400	0	6.61000E+06	0.00000E+00
75 167 1400	75 174 1300	3	4.48000E+06	1.70213E-02
75 174 1300	75 181 .	0	1.95000E+06	0.00000E+00
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	3	4.57000E+07	1.95479E-02
75 195 1515	75 202 1440	0	2.51000E+07	0.00000E+00
75 202 1440	75 209 1330	2	6.67000E+06	1.31649E-02
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	0	6.27000E+06	0.00000E+00
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	0	1.56000E+06	0.00000E+00
75 237 1345	75 244 1155	0	9.72000E+06	0.00000E+00
75 244 1155	75 251 1325	0	4.44000E+06	0.00000E+00
75 251 1325	75 258 1445	0	1.63000E+06	0.00000E+00
75 258 1445	75 265 1440	0	3.49000E+06	0.00000E+00
75 265 1440	75 272 1415	0	1.14000E+08	0.00000E+00
75 272 1415	75 280 1150	0	1.32000E+07	0.00000E+00
75 280 1150	75 287 1220	0	2.13000E+07	0.00000E+00
75 287 1220	75 293 1145	0	1.72000E+07	0.00000E+00
75 293 1145	75 301 1210	6	1.32000E+07	3.76995E-02

WEIR 108 1975 TOTAL COPPER
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	4	8.68000E+06	2.65293E-02
75 307 1320	75 314 1545	4	8.49000E+06	2.45346E-02
75 314 1545	75 322 1255	4	2.23000E+07	2.32713E-02
75 322 1255	75 328 1540	0	8.63000E+06	0.00000E+00
75 328 1540	75 335 1520	0	8.23000E+06	0.00000E+00
WINTER 1975		2	1.01520E+08	1.43152E-01
SPRING 1975		2	2.28430E+08	1.61303E-01
SUMMER 1975		1	1.26513E+08	4.97340E-02
FALL 1975		1	2.44790E+08	1.12035E-01
TOTAL 1975		2	7.01253E+08	4.66223E-01

WEIR 101 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	.	1.39000E+07	.
74 357 1000	74 364 0925	.	4.92000E+06	.
74 364 0925	75 006 1115	0	5.46000E+06	0.00000E+00
75 006 1115	75 013 1100	0	1.23000E+07	0.00000E+00
75 013 1100	75 020 1000	0	1.84000E+07	0.00000E+00
75 020 1000	75 027 1105	0	1.65000E+07	0.00000E+00
75 027 1105	75 034 1145	0	1.18000E+07	0.00000E+00
75 034 1145	75 041 1240	0	2.04000E+07	0.00000E+00
75 041 1240	75 049 1340	0	1.67000E+07	0.00000E+00
75 049 1340	75 055 1205	0	1.02000E+07	0.00000E+00
75 055 1205	75 062 1225	0	1.33000E+07	0.00000E+00
75 062 1225	75 069 1210	0	8.99000E+06	0.00000E+00
75 069 1210	75 076 1320	0	3.25000E+07	0.00000E+00
75 076 1320	75 083 1345	0	5.73000E+07	0.00000E+00
75 083 1340	75 090 1245	0	3.10000E+07	0.00000E+00
75 090 1245	75 097 1215	0	1.74000E+07	0.00000E+00
75 097 1215	75 104 1210	0	1.25000E+07	0.00000E+00
75 104 1210	75 111 1205	0	1.70000E+07	0.00000E+00
75 111 1205	75 118 1205	0	1.86000E+07	0.00000E+00
75 118 1205	75 125 1305	0	3.08000E+07	0.00000E+00
75 125 1305	75 132 1135	0	2.27000E+07	0.00000E+00
75 132 1135	75 139 1150	0	2.22000E+07	0.00000E+00
75 139 1150	75 147 1130	0	1.18000E+07	0.00000E+00
75 147 1130	75 153 1355	0	7.37000E+06	0.00000E+00
75 153 1355	75 160 1150	0	6.23000E+06	0.00000E+00
75 160 1150	75 167 .	4	5.45000E+06	1.89907E-02
75 167 .	75 174 1125	0	6.64000E+06	0.00000E+00
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	.	3.78000E+07	.
75 195 1220	75 202 1140	0	2.82000E+07	0.00000E+00
75 202 1140	75 209 1205	5	8.55000E+06	2.34174E-02
75 209 1205	75 216 1100	18	4.55000E+06	8.05666E-02
75 216 1100	75 223 1130	12	6.08000E+06	5.26782E-02
75 223 1130	75 230 1200	34	1.34000E+07	1.52722E-01
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	8	1.07000E+07	3.50155E-02
75 244 1020	75 251 1130	0	9.93000E+06	0.00000E+00
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	15	5.27000E+06	6.68437E-02
75 265 1150	75 272 1200	71	8.27000E+07	3.14298E-01
75 272 1200	75 280 0925	14	1.84000E+07	6.41877E-02
75 280 0925	75 287 0920	38	2.45000E+07	1.66888E-01
75 287 0920	75 293 0950	38	2.20000E+07	1.68216E-01
75 293 0950	75 301 1040	47	1.71000E+07	2.07171E-01

WEIR 101 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	24	1.12000E+07	1.06684E-01
75 307 1040	75 314 1330	40	1.15000E+07	1.76184E-01
75 314 1330	75 321 0920	17	2.55000E+07	7.56972E-02
75 321 0920	75 328 1150	11	1.34000E+07	5.00221E-02
75 328 1150	75 335 1145	26	1.07000E+07	1.14653E-01
WINTER 1975		0	1.60080E+08	0.00000E+00
SPRING 1975		0	2.90160E+08	0.00000E+00
SUMMER 1975		6	1.34624E+08	3.63391E-01
FALL 1975		26	2.55920E+08	1.51085E+00
TOTAL 1975		8	8.40784E+08	1.87424E+00

WEIR 102 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	.	1.27000E+07	.
74 357 1020	74 364 1015	.	5.23000E+06	.
74 364 1025	75 006 1140	0	4.35000E+06	0.00000E+00
75 006 1140	75 013 1125	0	1.12000E+07	0.00000E+00
75 013 1125	75 020 1020	0	1.78000E+07	0.00000E+00
75 020 1020	75 027 1135	0	1.78000E+07	0.00000E+00
75 027 1135	75 034 1205	0	1.05000E+07	0.00000E+00
75 034 1255	75 041 1300	0	1.92000E+07	0.00000E+00
75 041 1300	75 049 1350	0	1.54000E+07	0.00000E+00
75 049 1350	75 055 1220	0	9.00000E+06	0.00000E+00
75 055 1220	75 062 1240	0	1.16000E+07	0.00000E+00
75 062 1240	75 069 1415	0	6.64000E+06	0.00000E+00
75 069 1415	75 076 1330	0	3.18000E+07	0.00000E+00
75 076 1330	75 083 1400	0	6.04000E+07	0.00000E+00
75 083 1400	75 090 1300	0	2.56000E+07	0.00000E+00
75 090 1300	75 097 1240	0	1.34000E+07	0.00000E+00
75 097 1240	75 104 1225	0	9.38000E+06	0.00000E+00
75 104 1225	75 111 1225	0	1.36000E+07	0.00000E+00
75 111 1225	75 118 1225	0	1.55000E+07	0.00000E+00
75 118 1225	75 125 1320	0	2.88000E+07	0.00000E+00
75 125 1320	75 132 1150	0	2.09000E+07	0.00000E+00
75 132 1150	75 139 1205	0	2.03000E+07	0.00000E+00
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	0	5.75000E+06	0.00000E+00
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	0	5.84000E+06	0.00000E+00
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	0	4.92000E+07	0.00000E+00
75 195 1240	75 202 1200	0	2.68000E+07	0.00000E+00
75 202 1200	75 209 1245	4	6.30000E+06	1.33358E+05
75 209 1245	75 216 1115	6	4.15000E+06	1.22033E+05
75 216 1115	75 223 1140	0	3.90000E+06	0.00000E+00
75 223 1140	75 230 1220	19	1.73000E+07	1.75886E+06
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	17	7.60000E+06	6.81543E+05
75 251 1145	75 258 1200	5	2.58000E+06	7.19656E+04
75 258 1200	75 265 1205	5	3.69000E+06	9.73483E+04
75 265 1205	75 272 1230	51	9.24000E+07	2.46175E+07
75 272 1230	75 280 0940	31	1.26000E+07	2.01679E+06
75 280 0940	75 287 0940	21	1.89000E+07	2.10876E+06
75 287 0940	75 293 1010	41	1.68000E+07	3.61752E+06
75 293 1010	75 301 1055	39	1.26000E+07	2.59489E+06

WEIR 102 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	31	8.76000E+06	1.40215E+06
75 307 1050	75 314 1345	19	7.61000E+06	7.61794E+05
75 314 1345	75 321 0940	22	2.33000E+07	2.66043E+06
75 321 0940	75 328 1205	38	1.09000E+07	2.15954E+06
75 328 1205	75 335 1200	41	8.14000E+06	1.74429E+06
WINTER 1975		0	1.55920E+08	0.00000E+00
SPRING 1975		0	2.60980E+08	0.00000E+00
SUMMER 1975		4	1.35330E+08	2.01425E+06
FALL 1975		28	2.25880E+08	4.45345E+07
TOTAL 1975		10	7.71520E+08	4.65488E+07

WEIR 103 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	.	8.10000E+06	.
74 357 1050	74 364 1040	.	2.80000E+06	.
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	0	1.02000E+07	0.00000E+00
75 013 1200	75 020 1040	0	1.71000E+07	0.00000E+00
75 020 1040	75 027 1155	0	1.65000E+07	0.00000E+00
75 027 1155	75 034 1400	0	9.57000E+06	0.00000E+00
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	0	1.64000E+07	0.00000E+00
75 049 1600	75 055 1425	0	1.01000E+07	0.00000E+00
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	0	8.10000E+06	0.00000E+00
75 069 1355	75 076 1600	0	3.77000E+07	0.00000E+00
75 076 1600	75 083 1545	0	6.80000E+07	0.00000E+00
75 083 1545	75 090 1350	0	3.23000E+07	0.00000E+00
75 090 1350	75 097 1540	0	1.87000E+07	0.00000E+00
75 097 1540	75 104 1540	0	1.34000E+07	0.00000E+00
75 104 1540	75 111 1555	0	1.92000E+07	0.00000E+00
75 111 1555	75 118 1540	0	2.29000E+07	0.00000E+00
75 118 1540	75 125 1615	0	3.86000E+07	0.00000E+00
75 125 1615	75 132 1610	0	3.02000E+07	0.00000E+00
75 132 1610	75 139 1515	0	2.99000E+07	0.00000E+00
75 139 1515	75 147 .	0	1.48000E+07	0.00000E+00
75 147 1435	75 153 1705	0	1.01000E+07	0.00000E+00
75 153 1705	75 160 1540	0	7.29000E+06	0.00000E+00
75 160 1540	75 167 1505	11	6.65000E+06	4.33754E-02
75 167 1505	75 174 1245	22	1.25000E+07	8.71451E-02
75 174 1245	75 181 .	4	2.13000E+06	1.42744E-02
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	21	4.75000E+07	8.39905E-02
75 195 1600	75 202 1515	0	2.91000E+07	0.00000E+00
75 202 1515	75 209 1400	0	7.22000E+06	0.00000E+00
75 209 1400	75 216 .	0	3.15000E+06	0.00000E+00
75 216 .	75 223 1450	21	4.09000E+06	8.16246E-02
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	0	7.61000E+06	0.00000E+00
75 239 1040	75 244 1220	7	5.51000E+06	2.83912E-02
75 244 1220	75 251 1415	6	4.30000E+06	2.21609E-02
75 251 1500	75 258 1500	0	2.32000E+06	0.00000E+00
75 258 1500	75 265 1500	4	3.03000E+06	1.65615E-02
75 265 1500	75 272 1445	47	8.88000E+07	1.86514E-01
75 272 1445	75 280 1220	71	1.65000E+07	2.81546E-01
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	35	1.28000E+07	1.36830E-01
75 328 1600	75 335 1555	70	1.23000E+07	2.76814E-01
WINTER 1975		0	1.37330E+08	0.00000E+00
SPRING 1975		0	3.43900E+08	0.00000E+00
SUMMER 1975		8	1.44642E+08	3.38801E-01
FALL 1975		33	2.53650E+08	9.20426E-01
TOTAL 1975		9	8.79522E+08	1.25923E+00

WEIR 105 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	0	2.15000E+06	0.00000E+00
75 013 1500	75 020 1150	0	3.43000E+06	0.00000E+00
75 020 1140	75 027 1320	0	3.41000E+06	0.00000E+00
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	0	3.92000E+06	0.00000E+00
75 041 1130	75 049 1100	0	2.94000E+06	0.00000E+00
75 049 1100	75 055 1100	0	1.74000E+06	0.00000E+00
75 055 1100	75 062 1120	0	2.33000E+06	0.00000E+00
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	0	6.44000E+06	0.00000E+00
75 076 1150	75 083 1220	0	1.22000E+07	0.00000E+00
75 083 1220	75 090 1110	0	5.53000E+06	0.00000E+00
75 090 1110	75 097 1110	0	2.83000E+06	0.00000E+00
75 097 1110	75 104 1105	0	1.82000E+06	0.00000E+00
75 104 1105	75 111 1050	0	2.65000E+06	0.00000E+00
75 111 1050	75 118 1100	0	3.19000E+06	0.00000E+00
75 118 1100	75 125 1130	0	5.68000E+06	0.00000E+00
75 125 1130	75 132 1040	0	3.77000E+06	0.00000E+00
75 132 1040	75 139 1040	0	4.08000E+06	0.00000E+00
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	0	1.08000E+06	0.00000E+00
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	0	2.88000E+05	0.00000E+00
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	6	8.64000E+06	1.53600E-01
75 195 1040	75 202 1030	0	4.77000E+06	0.00000E+00
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	8	1.50000E+06	2.11733E-01
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	44	2.27000E+07	1.18667E+00
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	21	3.89000E+06	5.54667E-01
75 287 0850	75 293 0850	57	4.64000E+06	1.50933E+00
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		0	2.18300E+07	0.00000E+00
SPRING 1975		0	5.24300E+07	0.00000E+00
SUMMER 1975		3	2.01269E+07	3.65333E-01
FALL 1975		41	4.65736E+07	3.25067E+00
TOTAL 1975		5	1.40961E+08	3.61600E+00

WEIR 106 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	0	5.19000E+06	0.00000E+00
75 013 1520	75 020 1150	0	5.79000E+06	0.00000E+00
75 020 1150	75 027 1340	0	6.34000E+06	0.00000E+00
75 027 1340	75 034 1050	0	4.30000E+06	0.00000E+00
75 034 1050	75 041 1145	0	6.39000E+06	0.00000E+00
75 041 1145	75 049 1120	0	6.28000E+06	0.00000E+00
75 049 1120	75 055 1120	0	3.69000E+06	0.00000E+00
75 055 1120	75 062 1135	0	4.76000E+06	0.00000E+00
75 062 1135	75 069 1120	0	2.68000E+06	0.00000E+00
75 069 1120	75 076 1205	0	1.37000E+07	0.00000E+00
75 076 1205	75 083 1240	0	2.61000E+07	0.00000E+00
75 083 1240	75 090 1130	0	1.09000E+07	0.00000E+00
75 090 1130	75 097 1125	0	6.59000E+06	0.00000E+00
75 097 1125	75 104 1125	0	5.47000E+06	0.00000E+00
75 104 1125	75 111 1105	0	7.82000E+06	0.00000E+00
75 111 1105	75 118 1110	0	1.09000E+07	0.00000E+00
75 118 1110	75 125 1150	0	1.77000E+07	0.00000E+00
75 125 1150	75 132 1055	0	8.35000E+06	0.00000E+00
75 132 1055	75 139 1100	0	8.81000E+06	0.00000E+00
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	0	2.79000E+06	0.00000E+00
75 153 1045	75 160 1055	0	4.53000E+06	0.00000E+00
75 160 1055	75 167 1030	9	4.32000E+06	9.09759E-02
75 167 1030	75 174 1020	19	3.81000E+06	1.99370E-01
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	24	2.37000E+07	2.48688E-01
75 195 1050	75 202 .	0	1.14000E+07	0.00000E+00
75 202 .	75 209 1145	0	2.58000E+06	0.00000E+00
75 209 1145	75 216 1020	35	1.71000E+06	3.67261E-01
75 216 1020	75 223 1055	5	1.37000E+06	5.55089E-02
75 223 1055	75 230 1130	52	5.59000E+06	5.49843E-01
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	42	2.62000E+06	4.40714E-01
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	14	1.72000E+06	1.50052E-01
75 265 1100	75 272 1040	36	5.13000E+07	3.83001E-01
75 272 1040	75 280 0850	13	6.10000E+06	1.40609E-01
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	45	1.01000E+07	4.70094E-01
75 293 0900	75 301 1005	15	6.64000E+06	1.58447E-01
75 301 1005	75 307 0850	17	4.20000E+06	1.76285E-01
75 307 0850	75 314 1250	41	4.12000E+06	4.30220E-01
75 314 1250	75 321 1155	38	1.06000E+07	4.00839E-01
75 321 1155	75 328 1040	15	4.86000E+06	1.56348E-01
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		0	4.27400E+07	0.00000E+00
SPRING 1975		0	1.25340E+08	0.00000E+00
SUMMER 1975		16	6.73110E+07	1.51165E+00
FALL 1975		28	1.15510E+08	2.90661E+00
TOTAL 1975		11	3.50901E+08	4.41826E+00

WEIR 107 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	.	1.08000E+06	.
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	0	2.58000E+06	0.00000E+00
75 013 1600	75 021 1220	0	2.94000E+06	0.00000E+00
75 021 1220	75 027 1020	0	2.34000E+06	0.00000E+00
75 027 1020	75 034 0955	0	1.80000E+06	0.00000E+00
75 034 0955	75 041 1030	0	4.05000E+06	0.00000E+00
75 041 1030	75 049 1025	0	3.04000E+06	0.00000E+00
75 049 1025	75 055 1020	0	1.74000E+06	0.00000E+00
75 055 1020	75 062 1040	0	2.43000E+06	0.00000E+00
75 062 1040	75 069 1000	0	1.45000E+06	0.00000E+00
75 069 1120	75 076 1045	0	6.52000E+06	0.00000E+00
75 076 1045	75 083 1110	0	7.84000E+06	0.00000E+00
75 083 1110	75 090 1030	0	4.25000E+06	0.00000E+00
75 090 1030	75 097 1025	0	3.49000E+06	0.00000E+00
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	0	2.28000E+06	0.00000E+00
75 111 1015	75 118 1005	0	2.40000E+06	0.00000E+00
75 118 1005	75 125 1045	0	4.05000E+06	0.00000E+00
75 125 1045	75 132 1000	0	2.93000E+06	0.00000E+00
75 132 1000	75 139 0950	0	3.73000E+06	0.00000E+00
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	0	1.15000E+06	0.00000E+00
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	4	9.51000E+05	1.35461E-01
75 167 0935	75 174 1107	207	9.19000E+05	7.34043E+00
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	28	4.22000E+06	9.85816E-01
75 195 0955	75 202 1000	4	3.68000E+06	1.52128E-01
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	94	8.28000E+05	3.35106E+00
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	56	.	2.00000E+00
WINTER 1975		0	2.58540E+07	0.00000E+00
SPRING 1975		0	4.37500E+07	0.00000E+00

WEIR 107 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		67	1.65460E+07	1.19649E+01
FALL 1975		56	1.24900E+06	2.00000E+00
TOTAL 1975		16	8.73990E+07	1.39649E+01

WEIR 108 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	.	8.92000E+06	.
74 357 1120	74 364 1110	.	2.57000E+06	.
74 364 1110	75 006 1315	0	3.18000E+06	0.00000E+00
75 006 1315	75 013 1245	0	6.23000E+06	0.00000E+00
75 013 1245	75 020 1110	0	1.15000E+07	0.00000E+00
75 020 1110	75 027 1240	0	1.05000E+07	0.00000E+00
75 027 1240	75 034 1340	0	6.94000E+06	0.00000E+00
75 034 1340	75 041 1340	0	1.27000E+07	0.00000E+00
75 041 1340	75 049 1455	0	1.06000E+07	0.00000E+00
75 049 1455	75 055 1345	0	6.55000E+06	0.00000E+00
75 055 1345	75 062 1340	0	8.26000E+06	0.00000E+00
75 062 1340	75 069 1230	0	5.57000E+06	0.00000E+00
75 069 1230	75 076 1445	0	4.41000E+07	0.00000E+00
75 076 1445	75 083 1500	0	3.64000E+07	0.00000E+00
75 083 1500	75 090 1405	.	2.49000E+07	.
75 090 1405	75 097 1510	0	1.12000E+07	0.00000E+00
75 097 1510	75 104 1525	0	8.94000E+06	0.00000E+00
75 104 1525	75 111 1530	0	1.20000E+07	0.00000E+00
75 111 1530	75 118 1500	0	1.22000E+07	0.00000E+00
75 118 1500	75 125 1545	0	2.28000E+07	0.00000E+00
75 125 1545	75 132 1545	0	1.93000E+07	0.00000E+00
75 132 1545	75 139 1440	0	1.19000E+07	0.00000E+00
75 139 1440	75 147 1415	0	9.20000E+06	0.00000E+00
75 147 1415	75 153 1630	0	9.92000E+06	0.00000E+00
75 153 1630	75 160 1510	0	6.59000E+06	0.00000E+00
75 160 1510	75 167 1400	0	6.61000E+06	0.00000E+00
75 167 1400	75 174 1300	7	4.48000E+06	4.55452E-02
75 174 1300	75 181 .	4	1.95000E+06	2.87234E-02
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	20	4.57000E+07	1.33644E-01
75 195 1515	75 202 1440	0	2.51000E+07	0.00000E+00
75 202 1440	75 209 1330	0	6.67000E+06	0.00000E+00
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	7	6.27000E+06	4.36170E-02
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	0	1.56000E+06	0.00000E+00
75 237 1345	75 244 1155	28	9.72000E+06	1.83511E-01
75 244 1155	75 251 1325	5	4.44000E+06	3.36436E-02
75 251 1325	75 258 1445	22	1.63000E+06	1.44282E-01
75 258 1445	75 265 1440	5	3.49000E+06	3.03191E-02
75 265 1440	75 272 1415	54	1.14000E+08	3.59707E-01
75 272 1415	75 280 1150	41	1.32000E+07	2.75266E-01
75 280 1150	75 287 1220	20	2.13000E+07	1.32314E-01
75 287 1220	75 293 1145	27	1.72000E+07	1.78191E-01
75 293 1145	75 301 1210	17	1.32000E+07	1.10372E-01

WEIR 108 1975 TOTAL LEAD
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	19	8.68000E+06	1.26330E-01
75 307 1320	75 314 1545	40	8.49000E+06	2.65957E-01
75 314 1545	75 322 1255	38	2.23000E+07	2.52660E-01
75 322 1255	75 328 1540	37	8.63000E+06	2.47340E-01
75 328 1540	75 335 1520	47	8.23000E+06	3.13165E-01
WINTER 1975		0	1.01520E+08	0.00000E+00
SPRING 1975		0	2.28430E+08	0.00000E+00
SUMMER 1975		7	1.26513E+08	4.35040E-01
FALL 1975		29	2.44790E+08	2.46955E+00
TOTAL 1975		10	7.01253E+08	2.90459E+00

WEIR 101 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	4290	1.39000E+07	1.89907E+01
74 357 1000	74 364 0925	3140	4.92000E+06	1.39000E+01
74 364 0925	75 006 1115	3000	5.46000E+06	1.32802E+01
75 006 1115	75 013 1100	2730	1.23000E+07	1.20850E+01
75 013 1100	75 020 1000	3310	1.84000E+07	1.46525E+01
75 020 1000	75 027 1105	2030	1.65000E+07	8.98628E+00
75 027 1105	75 034 1145	1600	1.18000E+07	7.08278E+00
75 034 1145	75 041 1240	1700	2.04000E+07	7.52545E+00
75 041 1240	75 049 1340	1770	1.67000E+07	7.83533E+00
75 049 1340	75 055 1205	1450	1.02000E+07	6.41877E+00
75 055 1205	75 062 1225	1800	1.33000E+07	7.96813E+00
75 062 1225	75 069 1210	.	8.99000E+06	.
75 069 1210	75 076 1320	2170	3.25000E+07	9.60602E+00
75 076 1320	75 083 1345	3920	5.73000E+07	1.73528E+01
75 083 1340	75 090 1245	2100	3.10000E+07	9.29615E+00
75 090 1245	75 097 1215	1460	1.74000E+07	6.46304E+00
75 097 1215	75 104 1210	2110	1.25000E+07	9.34042E+00
75 104 1210	75 111 1205	2470	1.70000E+07	1.09340E+01
75 111 1205	75 118 1205	2320	1.86000E+07	1.02700E+01
75 118 1205	75 125 1305	2340	3.08000E+07	1.03586E+01
75 125 1305	75 132 1135	2090	2.27000E+07	9.25188E+00
75 132 1135	75 139 1150	2480	2.22000E+07	1.09783E+01
75 139 1150	75 147 1130	2300	1.18000E+07	1.01815E+01
75 147 1130	75 153 1355	2990	7.37000E+06	1.32359E+01
75 153 1355	75 160 1150	3100	6.23000E+06	1.37229E+01
75 160 1150	75 167 .	3120	5.45000E+06	1.38114E+01
75 167 .	75 174 1125	3780	6.64000E+06	1.67331E+01
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	5060	3.78000E+07	2.23993E+01
75 195 1220	75 202 1140	3200	2.82000E+07	1.41656E+01
75 202 1140	75 209 1205	2530	8.55000E+06	1.11996E+01
75 209 1205	75 216 1100	3500	4.55000E+06	1.54936E+01
75 216 1100	75 223 1130	3870	6.08000E+06	1.71315E+01
75 223 1130	75 230 1200	3960	1.34000E+07	1.75299E+01
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	4250	1.07000E+07	1.88136E+01
75 244 1020	75 251 1130	3390	9.93000E+06	1.50066E+01
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	3500	5.27000E+06	1.54936E+01
75 265 1150	75 272 1200	3520	8.27000E+07	1.55821E+01
75 272 1200	75 280 0925	2230	1.84000E+07	9.87162E+00
75 280 0925	75 287 0920	3250	2.45000E+07	1.43869E+01
75 287 0920	75 293 0950	2920	2.20000E+07	1.29261E+01
75 293 0950	75 301 1040	2320	1.71000E+07	1.02700E+01

WEIR 101 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	2380	1.12000E+07	1.05356E+01
75 307 1040	75 314 1330	2940	1.15000E+07	1.30146E+01
75 314 1330	75 321 0920	2640	2.55000E+07	1.16866E+01
75 321 0920	75 328 1150	2050	1.34000E+07	9.07481E+00
75 328 1150	75 335 1145	1950	1.07000E+07	8.63214E+00
WINTER 1975		2063	1.60080E+08	1.18725E+02
SPRING 1975		2212	2.90160E+08	1.27269E+02
SUMMER 1975		2798	1.34624E+08	1.61000E+02
FALL 1975		2545	2.55920E+08	1.46481E+02
TOTAL 1975		2404	8.40784E+08	5.53475E+02

WEIR 102 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	3140	1.27000E+07	1.63712E+01
74 357 1020	74 364 1015	2290	5.23000E+06	1.19395E+01
74 364 1025	75 006 1140	3280	4.35000E+06	1.71011E+01
75 006 1140	75 013 1125	2910	1.12000E+07	1.51721E+01
75 013 1125	75 020 1020	3330	1.78000E+07	1.73618E+01
75 020 1020	75 027 1135	2470	1.78000E+07	1.28780E+01
75 027 1135	75 034 1205	1890	1.05000E+07	9.85401E+00
75 034 1255	75 041 1300	2000	1.92000E+07	1.04275E+01
75 041 1300	75 049 1350	1210	1.54000E+07	6.30865E+00
75 049 1350	75 055 1220	1840	9.00000E+06	9.59333E+00
75 055 1220	75 062 1240	1540	1.16000E+07	8.02920E+00
75 062 1240	75 069 1415	1470	6.64000E+06	7.66423E+00
75 069 1415	75 076 1330	2050	3.18000E+07	1.06882E+01
75 076 1330	75 083 1400	2570	6.04000E+07	1.33994E+01
75 083 1400	75 090 1300	2100	2.56000E+07	1.09489E+01
75 090 1300	75 097 1240	1970	1.34000E+07	1.02711E+01
75 097 1240	75 104 1225	2080	9.38000E+06	1.08446E+01
75 104 1225	75 111 1225	2400	1.36000E+07	1.25130E+01
75 111 1225	75 118 1225	1930	1.55000E+07	1.00626E+01
75 118 1225	75 125 1320	1750	2.88000E+07	9.12409E+00
75 125 1320	75 132 1150	2200	2.09000E+07	1.14703E+01
75 132 1150	75 139 1205	2340	2.03000E+07	1.22002E+01
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	2400	5.75000E+06	1.25130E+01
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	4070	5.84000E+06	2.12200E+01
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	4100	4.92000E+07	2.13764E+01
75 195 1240	75 202 1200	8060	2.68000E+07	4.20229E+01
75 202 1200	75 209 1245	8760	6.30000E+06	4.56726E+01
75 209 1245	75 216 1115	8730	4.15000E+06	4.55162E+01
75 216 1115	75 223 1140	9750	3.90000E+06	5.08342E+01
75 223 1140	75 230 1220	12200	1.73000E+07	6.36079E+01
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	11100	7.60000E+06	5.78728E+01
75 251 1145	75 258 1200	14300	2.58000E+06	7.45568E+01
75 258 1200	75 265 1205	17200	3.69000E+06	8.96767E+01
75 265 1205	75 272 1230	9810	9.24000E+07	5.11470E+01
75 272 1230	75 280 0940	9400	1.26000E+07	4.90094E+01
75 280 0940	75 287 0940	9860	1.89000E+07	5.14077E+01
75 287 0940	75 293 1010	8730	1.68000E+07	4.55162E+01
75 293 1010	75 301 1055	9130	1.26000E+07	4.76017E+01

WEIR 102 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	6800	8.76000E+06	3.54536E+01
75 307 1050	75 314 1345	13100	7.61000E+06	6.83003E+01
75 314 1345	75 321 0940	8110	2.33000E+07	4.22836E+01
75 321 0940	75 328 1205	15500	1.09000E+07	8.08133E+01
75 328 1205	75 335 1200	14200	8.14000E+06	7.40355E+01
WINTER 1975		1992	1.49280E+08	1.35036E+02
SPRING 1975		1943	2.60980E+08	1.31700E+02
SUMMER 1975		4282	1.35380E+08	2.90250E+02
FALL 1975		11326	2.25880E+08	7.67675E+02
TOTAL 1975		4886	7.71520E+08	1.32466E+03

WEIR 103 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	3140	8.10000E+06	1.23817E+01
74 357 1050	74 364 1040	2500	2.80000E+06	9.85804E+00
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	2300	1.02000E+07	9.06940E+00
75 013 1200	75 020 1040	2660	1.71000E+07	1.04890E+01
75 020 1040	75 027 1155	1530	1.65000E+07	6.03312E+00
75 027 1155	75 034 1400	1370	9.57000E+06	5.40221E+00
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	1490	1.64000E+07	5.87539E+00
75 049 1600	75 055 1425	1470	1.01000E+07	5.79653E+00
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	1100	8.10000E+06	4.33754E+00
75 069 1355	75 076 1600	1770	3.77000E+07	6.97950E+00
75 076 1600	75 083 1545	1860	6.80000E+07	7.33438E+00
75 083 1545	75 090 1350	1810	3.23000E+07	7.13722E+00
75 090 1350	75 097 1540	1400	1.87000E+07	5.52050E+00
75 097 1540	75 104 1540	1700	1.34000E+07	6.70347E+00
75 104 1540	75 111 1555	1720	1.92000E+07	6.78233E+00
75 111 1555	75 118 1540	2120	2.29000E+07	8.35962E+00
75 118 1540	75 125 1615	2330	3.86000E+07	9.18770E+00
75 125 1615	75 132 1610	1770	3.02000E+07	6.97950E+00
75 132 1610	75 139 1515	2120	2.99000E+07	8.35962E+00
75 139 1515	75 147 .	1970	1.48000E+07	7.76814E+00
75 147 1435	75 153 1705	2580	1.01000E+07	1.01735E+01
75 153 1705	75 160 1540	2270	7.29000E+06	8.95110E+00
75 160 1540	75 167 1505	2660	6.65000E+06	1.04890E+01
75 167 1505	75 174 1245	3630	1.25000E+07	1.43139E+01
75 174 1245	75 181 .	1900	2.13000E+06	7.49211E+00
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	3750	4.75000E+07	1.47871E+01
75 195 1600	75 202 1515	2030	2.91000E+07	8.00473E+00
75 202 1515	75 209 1400	1870	7.22000E+06	7.37382E+00
75 209 1400	75 216 .	2270	3.15000E+06	8.95110E+00
75 216 .	75 223 1450	2910	4.09000E+06	1.14748E+01
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	2310	7.61000E+06	9.10883E+00
75 239 1040	75 244 1220	3280	5.51000E+06	1.29338E+01
75 244 1220	75 251 1415	2760	4.30000E+06	1.08833E+01
75 251 1500	75 258 1500	2080	2.32000E+06	8.20189E+00
75 258 1500	75 265 1500	3360	3.03000E+06	1.32492E+01
75 265 1500	75 272 1445	2920	8.88000E+07	1.15142E+01
75 272 1445	75 280 1220	1680	1.65000E+07	6.62461E+00
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	1720	1.28000E+07	6.78233E+00
75 328 1600	75 335 1555	1920	1.23000E+07	7.57098E+00
WINTER 1975		2057	1.37330E+08	6.49054E+01
SPRING 1975		1865	3.43900E+08	9.56230E+01
SUMMER 1975		2625	1.44642E+08	1.13880E+02
FALL 1975		2349	2.53650E+08	6.48265E+01
TOTAL 1975		2206	8.79522E+08	3.39235E+02

WEIR 105 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	3700	2.15000E+06	9.86667E+01
75 013 1500	75 020 1150	2200	3.43000E+06	5.86667E+01
75 020 1140	75 027 1320	1650	3.41000E+06	4.40000E+01
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	1310	3.92000E+06	3.49333E+01
75 041 1130	75 049 1100	1180	2.94000E+06	3.14667E+01
75 049 1100	75 055 1100	1190	1.74000E+06	3.17333E+01
75 055 1100	75 062 1120	1380	2.33000E+06	3.68000E+01
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	1440	6.44000E+06	3.84000E+01
75 076 1150	75 083 1220	2070	1.22000E+07	5.52000E+01
75 083 1220	75 090 1110	1340	5.53000E+06	3.57333E+01
75 090 1110	75 097 1110	1290	2.83000E+06	3.44000E+01
75 097 1110	75 104 1105	1640	1.82000E+06	4.37333E+01
75 104 1105	75 111 1050	1610	2.65000E+06	4.29333E+01
75 111 1050	75 118 1100	1790	3.19000E+06	4.77333E+01
75 118 1100	75 125 1130	1740	5.68000E+06	4.64000E+01
75 125 1130	75 132 1040	1690	3.77000E+06	4.50667E+01
75 132 1040	75 139 1040	1690	4.08000E+06	4.50667E+01
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	2260	1.08000E+06	6.02667E+01
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	2330	2.88000E+05	6.21333E+01
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	2820	8.64000E+06	7.52000E+01
75 195 1040	75 202 1030	2050	4.77000E+06	5.46667E+01
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	3150	1.50000E+06	8.40000E+01
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	2750	2.27000E+07	7.33333E+01
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	2050	3.89000E+06	5.46667E+01
75 287 0850	75 293 0850	3840	4.64000E+06	1.02400E+02
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		1801	2.18300E+07	3.36267E+02
SPRING 1975		1687	5.24300E+07	4.94933E+02
SUMMER 1975		2587	2.01269E+07	2.76000E+02
FALL 1975		2880	4.65736E+07	2.30400E+02
TOTAL 1975		2006	1.40961E+08	1.33760E+03

WEIR 106 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	2700	5.19000E+06	2.83316E+01
75 013 1520	75 020 1150	3180	5.79000E+06	3.33683E+01
75 020 1150	75 027 1340	1820	6.34000E+06	1.90976E+01
75 027 1340	75 034 1050	1220	4.30000E+06	1.28017E+01
75 034 1050	75 041 1145	1610	6.39000E+06	1.68940E+01
75 041 1145	75 049 1120	.	6.28000E+06	.
75 049 1120	75 055 1120	1230	3.69000E+06	1.29066E+01
75 055 1120	75 062 1135	1460	4.76000E+06	1.53200E+01
75 062 1135	75 069 1120	1320	2.68000E+06	1.38510E+01
75 069 1120	75 076 1205	2420	1.37000E+07	2.53935E+01
75 076 1205	75 083 1240	4090	2.61000E+07	4.29171E+01
75 083 1240	75 090 1130	1630	1.09000E+07	1.71039E+01
75 090 1130	75 097 1125	1390	6.59000E+06	1.45855E+01
75 097 1125	75 104 1125	1750	5.47000E+06	1.83631E+01
75 104 1125	75 111 1105	1840	7.82000E+06	1.93075E+01
75 111 1105	75 118 1110	1830	1.09000E+07	1.92025E+01
75 118 1110	75 125 1150	2320	1.77000E+07	2.43442E+01
75 125 1150	75 132 1055	1770	8.35000E+06	1.85729E+01
75 132 1055	75 139 1100	2450	8.81000E+06	2.57083E+01
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	3680	2.79000E+06	3.86149E+01
75 153 1045	75 160 1055	2970	4.53000E+06	3.11647E+01
75 160 1055	75 167 1030	3600	4.32000E+06	3.77754E+01
75 167 1030	75 174 1020	4800	3.81000E+06	5.03673E+01
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	9890	2.37000E+07	1.03778E+02
75 195 1050	75 202 .	10500	1.14000E+07	1.10178E+02
75 202 .	75 209 1145	2290	2.58000E+06	2.40294E+01
75 209 1145	75 216 1020	7690	1.71000E+06	8.06925E+01
75 216 1020	75 223 1055	4380	1.37000E+06	4.59601E+01
75 223 1055	75 230 1130	25300	5.59000E+06	2.65477E+02
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	37000	2.62000E+06	3.88248E+02
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	156E3	1.72000E+06	1.63694E+03
75 265 1100	75 272 1040	96800	5.13000E+07	1.01574E+03
75 272 1040	75 280 0850	2990	6.10000E+06	3.13746E+01
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	3310	1.01000E+07	3.47324E+01
75 293 0900	75 301 1005	2540	6.64000E+06	2.66527E+01
75 301 1005	75 307 0850	2130	4.20000E+06	2.23505E+01
75 307 0850	75 314 1250	2030	4.12000E+06	2.13012E+01
75 314 1250	75 321 1155	4110	1.06000E+07	4.31270E+01
75 321 1155	75 328 1040	2300	4.86000E+06	2.41343E+01
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		1889	4.27400E+07	1.38720E+02
SPRING 1975		2207	1.25340E+08	2.77964E+02
SUMMER 1975		7936	6.73110E+07	7.49423E+02
FALL 1975		30921	1.15510E+08	3.24460E+03
TOTAL 1975		11062	3.50901E+08	4.41070E+03

WEIR 107 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	5210	1.08000E+06	1.84752E+02
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	6750	2.58000E+06	2.39362E+02
75 013 1600	75 021 1220	6190	2.94000E+06	2.19504E+02
75 021 1220	75 027 1020	2780	2.34000E+06	9.85816E+01
75 027 1020	75 034 0955	1440	1.80000E+06	5.10638E+01
75 034 0955	75 041 1030	1100	4.05000E+06	3.90071E+01
75 041 1030	75 049 1025	1760	3.04000E+06	6.24113E+01
75 049 1025	75 055 1020	2300	1.74000E+06	8.15603E+01
75 055 1020	75 062 1040	2130	2.43000E+06	7.55319E+01
75 062 1040	75 069 1000	1300	1.45000E+06	4.60993E+01
75 069 1120	75 076 1045	2800	6.52000E+06	9.92908E+01
75 076 1045	75 083 1110	3310	7.84000E+06	1.17376E+02
75 083 1110	75 090 1030	2070	4.25000E+06	7.34043E+01
75 090 1030	75 097 1025	2040	3.49000E+06	7.23404E+01
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	3130	2.28000E+06	1.10993E+02
75 111 1015	75 118 1005	3420	2.40000E+06	1.21277E+02
75 118 1005	75 125 1045	2620	4.05000E+06	9.29078E+01
75 125 1045	75 132 1000	2970	2.93000E+06	1.05319E+02
75 132 1000	75 139 0950	2970	3.73000E+06	1.05319E+02
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	16700	1.15000E+06	5.92199E+02
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	2500	9.51000E+05	8.86525E+01
75 167 0935	75 174 1107	12200	9.19000E+05	4.32624E+02
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	4380	4.22000E+06	1.55319E+02
75 195 0955	75 202 1000	3350	3.68000E+06	1.18794E+02
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	6360	8.28000E+05	2.25532E+02
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	4510	.	1.59929E+02
	WINTER 1975	3296	2.58540E+07	1.05177E+03
	SPRING 1975	3939	4.37500E+07	1.53652E+03

WEIR 10 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM

WEIR 107 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		5758	1.65460E+07	1.02092E+03
FALL 1975		4510	1.24900E+06	1.59929E+02
TOTAL 1975		4088	8.73990E+07	3.76915E+03

WEIR 108 1975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	3070	8.92000E+06	2.04122E+01
74 357 1120	74 364 1110	2790	2.57000E+06	1.85505E+01
74 364 1110	75 006 1315	2860	3.18000E+06	1.90160E+01
75 006 1315	75 013 1245	2520	6.23000E+06	1.67553E+01
75 013 1245	75 020 1110	2380	1.15000E+07	1.58245E+01
75 020 1110	75 027 1240	1920	1.05000E+07	1.27660E+01
75 027 1240	75 034 1340	1450	6.94000E+06	9.64096E+00
75 034 1340	75 041 1340	1590	1.27000E+07	1.05718E+01
75 041 1340	75 049 1455	1460	1.06000E+07	9.70745E+00
75 049 1455	75 055 1345	1520	6.55000E+06	1.01064E+01
75 055 1345	75 062 1340	1490	8.26000E+06	9.90691E+00
75 062 1340	75 069 1230	1480	5.57000E+06	9.84043E+00
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	1680	3.64000E+07	1.11702E+01
75 083 1500	75 090 1405	1660	2.49000E+07	1.10372E+01
75 090 1405	75 097 1510	1720	1.12000E+07	1.14362E+01
75 097 1510	75 104 1525	1720	8.94000E+06	1.14362E+01
75 104 1525	75 111 1530	1720	1.20000E+07	1.14362E+01
75 111 1530	75 118 1500	1800	1.22000E+07	1.19681E+01
75 118 1500	75 125 1545	1940	2.28000E+07	1.28989E+01
75 125 1545	75 132 1545	1940	1.93000E+07	1.28989E+01
75 132 1545	75 139 1440	1620	1.19000E+07	1.07713E+01
75 139 1440	75 147 1415	1710	9.20000E+06	1.13697E+01
75 147 1415	75 153 1630	2420	9.92000E+06	1.60904E+01
75 153 1630	75 160 1510	2260	6.59000E+06	1.50266E+01
75 160 1510	75 167 1400	2700	6.61000E+06	1.79521E+01
75 167 1400	75 174 1300	2960	4.48000E+06	1.96809E+01
75 174 1300	75 181 .	2370	1.95000E+06	1.57580E+01
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	4010	4.57000E+07	2.66622E+01
75 195 1515	75 202 1440	2500	2.51000E+07	1.66223E+01
75 202 1440	75 209 1330	2380	6.67000E+06	1.58245E+01
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	2910	6.27000E+06	1.93484E+01
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	2770	1.56000E+06	1.84176E+01
75 237 1345	75 244 1155	3440	9.72000E+06	2.28723E+01
75 244 1155	75 251 1325	2820	4.44000E+06	1.87500E+01
75 251 1325	75 258 1445	2460	1.63000E+06	1.63564E+01
75 258 1445	75 265 1440	2890	3.49000E+06	1.92154E+01
75 265 1440	75 272 1415	2680	1.14000E+08	1.78191E+01
75 272 1415	75 280 1150	1800	1.32000E+07	1.19681E+01
75 280 1150	75 287 1220	3070	2.13000E+07	2.04122E+01
75 287 1220	75 293 1145	3400	1.72000E+07	2.26064E+01
75 293 1145	75 301 1210	4170	1.32000E+07	2.77261E+01

WEIR 1081975 TOTAL POTASSIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	2140	8.68000E+06	1.42287E+01
75 307 1320	75 314 1545	1980	8.49000E+06	1.31649E+01
75 314 1545	75 322 1255	2340	2.23000E+07	1.55585E+01
75 322 1255	75 328 1540	2070	8.63000E+06	1.37633E+01
75 328 1540	75 335 1520	2010	8.23000E+06	1.33644E+01
WINTER 1975		2095	1.01520E+08	1.53258E+02
SPRING 1975		1784	2.28430E+08	1.42354E+02
SUMMER 1975		2830	1.26513E+08	1.88165E+02
FALL 1975		2602	2.44790E+08	2.24934E+02
TOTAL 1975		2317	7.01253E+08	7.08710E+02

WEIR 101 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	8480	1.39000E+07	5.21788E+08
74 357 1000	74 364 0925	6240	4.92000E+06	1.35904E+08
74 364 0925	75 006 1115	8560	5.46000E+06	2.06895E+08
75 006 1115	75 013 1100	5580	1.23000E+07	3.03825E+08
75 013 1100	75 020 1000	5380	1.84000E+07	4.38212E+08
75 020 1000	75 027 1105	6730	1.65000E+07	4.91567E+08
75 027 1105	75 034 1145	6950	1.18000E+07	3.63037E+08
75 034 1145	75 041 1240	6820	2.04000E+07	6.15883E+08
75 041 1240	75 049 1340	7110	1.67000E+07	5.25618E+08
75 049 1340	75 055 1205	8100	1.02000E+07	3.65737E+08
75 055 1205	75 062 1225	6220	1.33000E+07	3.66206E+08
75 062 1225	75 069 1210	.	8.99000E+06	.
75 069 1210	75 076 1320	5200	3.25000E+07	7.48119E+08
75 076 1320	75 083 1345	1360	5.73000E+07	3.44967E+08
75 083 1340	75 090 1245	6000	3.10000E+07	8.23373E+08
75 090 1245	75 097 1215	4700	1.74000E+07	3.62019E+08
75 097 1215	75 104 1210	13300	1.25000E+07	7.35945E+08
75 104 1210	75 111 1205	6800	1.70000E+07	5.11731E+08
75 111 1205	75 118 1205	7200	1.86000E+07	5.92829E+08
75 118 1205	75 125 1305	6270	3.08000E+07	8.54874E+08
75 125 1305	75 132 1135	6830	2.27000E+07	6.86326E+08
75 132 1135	75 139 1150	6510	2.22000E+07	6.39761E+08
75 139 1150	75 147 1130	7350	1.18000E+07	3.83931E+08
75 147 1130	75 153 1355	3710	7.37000E+06	1.21039E+08
75 153 1355	75 160 1150	3870	6.23000E+06	1.06729E+08
75 160 1150	75 167 .	5410	5.45000E+06	1.30520E+08
75 167 .	75 174 1125	1390	6.64000E+06	4.08570E+07
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	105	3.78000E+07	1.75697E+07
75 195 1220	75 202 1140	1650	2.82000E+07	2.05976E+08
75 202 1140	75 209 1205	2060	8.55000E+06	7.79681E+07
75 209 1205	75 216 1100	1620	4.55000E+06	3.26295E+07
75 216 1100	75 223 1130	174	6.08000E+06	4.68313E+06
75 223 1130	75 230 1200	123	1.34000E+07	7.29615E+06
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	147	1.07000E+07	6.96282E+06
75 244 1020	75 251 1130	2440	9.93000E+06	1.07256E+08
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	3110	5.27000E+06	7.25529E+07
75 265 1150	75 272 1200	2450	8.27000E+07	8.96923E+08
75 272 1200	75 280 0925	5910	1.84000E+07	4.81381E+08
75 280 0925	75 287 0920	2830	2.45000E+07	3.06928E+08
75 287 0920	75 293 0950	3720	2.20000E+07	3.62284E+08
75 293 0950	75 301 1040	3240	1.71000E+07	2.45259E+08

WEIR 101 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	3480	1.12000E+07	1.72537E+08
75 307 1040	75 314 1330	3900	1.15000E+07	1.98539E+08
75 314 1330	75 321 0920	2700	2.55000E+07	3.04781E+08
75 321 0920	75 328 1150	6690	1.34000E+07	3.96839E+08
75 328 1150	75 335 1145	6500	1.07000E+07	3.07880E+08
WINTER 1975		6925	1.69070E+08	4.33467E+09
SPRING 1975		6269	2.90160E+08	6.80491E+09
SUMMER 1975		1655	1.34624E+08	6.31192E+08
FALL 1975		3914	2.55920E+08	3.85316E+09
TOTAL 1975		4776	8.40784E+08	1.56239E+10

WEIR 102 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	2240	1.27000E+07	1.48321E+08
74 357 1020	74 364 1015	1760	5.23000E+06	4.79917E+07
74 364 1025	75 006 1140	8320	4.35000E+06	1.88697E+08
75 006 1140	75 013 1125	7700	1.12000E+07	4.49635E+08
75 013 1125	75 020 1020	5670	1.78000E+07	5.26204E+08
75 020 1020	75 027 1135	7790	1.78000E+07	7.22951E+08
75 027 1135	75 034 1205	7360	1.05000E+07	4.02920E+08
75 034 1255	75 041 1300	7330	1.92000E+07	7.33764E+08
75 041 1300	75 049 1350	12500	1.54000E+07	1.00365E+09
75 049 1350	75 055 1220	6470	9.00000E+06	3.03597E+08
75 055 1220	75 062 1240	14100	1.16000E+07	8.52763E+08
75 062 1240	75 069 1415	9240	6.64000E+06	3.19883E+08
75 069 1415	75 076 1330	4930	3.18000E+07	8.17383E+08
75 076 1330	75 083 1400	1990	6.04000E+07	6.26674E+08
75 083 1400	75 090 1300	7590	2.56000E+07	1.01306E+09
75 090 1300	75 097 1240	7800	1.34000E+07	5.44943E+08
75 097 1240	75 104 1225	8030	9.38000E+06	3.92708E+08
75 104 1225	75 111 1225	7270	1.36000E+07	5.15495E+08
75 111 1225	75 118 1225	8030	1.55000E+07	6.48931E+08
75 118 1225	75 125 1320	7230	2.88000E+07	1.08563E+09
75 125 1320	75 132 1150	7200	2.09000E+07	7.84567E+08
75 132 1150	75 139 1205	8270	2.03000E+07	8.75292E+08
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	4540	5.75000E+06	1.36105E+08
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	1500	5.84000E+06	4.56726E+07
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	1940	4.92000E+07	4.97643E+08
75 195 1240	75 202 1200	12200	2.68000E+07	1.70469E+09
75 202 1200	75 209 1245	12700	6.30000E+06	4.17153E+08
75 209 1245	75 216 1115	6760	4.15000E+06	1.46267E+08
75 216 1115	75 223 1140	6630	3.90000E+06	1.34812E+08
75 223 1140	75 230 1220	3370	1.73000E+07	3.03968E+08
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	10800	7.60000E+06	4.27946E+08
75 251 1145	75 258 1200	14100	2.58000E+06	1.89666E+08
75 258 1200	75 265 1205	13400	3.69000E+06	2.57800E+08
75 265 1205	75 272 1230	5010	9.24000E+07	2.41358E+09
75 272 1230	75 280 0940	21200	1.26000E+07	1.39270E+09
75 280 0940	75 287 0940	9540	1.89000E+07	9.40073E+08
75 287 0940	75 293 1010	14800	1.68000E+07	1.29635E+09
75 293 1010	75 301 1055	20500	1.26000E+07	1.34672E+09

WEIR 102 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	17000	8.76000E+06	7.76434E+08
75 307 1050	75 314 1345	25400	7.61000E+06	1.00779E+09
75 314 1345	75 321 0940	8120	2.33000E+07	9.86423E+08
75 321 0940	75 328 1205	21000	1.09000E+07	1.19343E+09
75 328 1205	75 335 1200	21300	8.14000E+06	9.03973E+08
WINTER 1975		7540	1.55920E+08	5.70038E+09
SPRING 1975		6843	2.60980E+08	7.76067E+09
SUMMER 1975		6443	1.35380E+08	3.25021E+09
FALL 1975		15552	2.25880E+08	1.31329E+10
TOTAL 1975		9550	7.71520E+08	2.95242E+10

WEIR 103 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	8160	8.10000E+06	2.60631E+08
74 357 1050	74 364 1040	8480	2.80000E+06	9.36278E+07
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	7140	1.02000E+07	2.87177E+08
75 013 1200	75 020 1040	5950	1.71000E+07	4.01203E+08
75 020 1040	75 027 1155	7040	1.65000E+07	4.58044E+08
75 027 1155	75 034 1400	8990	9.57000E+06	3.39252E+08
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	8870	1.64000E+07	5.73612E+08
75 049 1600	75 055 1425	3590	1.01000E+07	1.42977E+08
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	8370	8.10000E+06	2.67338E+08
75 069 1355	75 076 1600	7500	3.77000E+07	1.11494E+09
75 076 1600	75 083 1545	3670	6.80000E+07	9.84069E+08
75 083 1545	75 090 1350	11800	3.23000E+07	1.50292E+09
75 090 1350	75 097 1540	8100	1.87000E+07	5.97279E+08
75 097 1540	75 104 1540	8840	1.34000E+07	4.67098E+08
75 104 1540	75 111 1555	5610	1.92000E+07	4.24732E+08
75 111 1555	75 118 1540	7970	2.29000E+07	7.19688E+08
75 118 1540	75 125 1615	8370	3.86000E+07	1.27398F+09
75 125 1615	75 132 1610	8510	3.02000E+07	1.01341E+09
75 132 1610	75 139 1515	6530	2.99000E+07	7.69901E+08
75 139 1515	75 147 .	7620	1.48000E+07	4.44700E+08
75 147 1435	75 153 1705	4490	1.01000E+07	1.78821E+08
75 153 1705	75 160 1540	4550	7.29000E+06	1.30795E+08
75 160 1540	75 167 1505	7250	6.65000E+06	1.90112E+08
75 167 1505	75 174 1245	1500	1.25000E+07	7.39353E+07
75 174 1245	75 181 .	7080	2.13000E+06	5.94653E+07
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	1890	4.75000E+07	3.54002E+08
75 195 1600	75 202 1515	5630	2.91000E+07	6.46029E+08
75 202 1515	75 209 1400	6630	7.22000E+06	1.88756E+08
75 209 1400	75 216 .	2590	3.15000E+06	3.21707E+07
75 216 .	75 223 1450	1840	4.09000E+06	2.96751E+07
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	1980	7.61000E+06	5.94156E+07
75 239 1040	75 244 1220	1460	5.51000E+06	3.17216E+07
75 244 1220	75 251 1415	3680	4.30000E+06	6.23975E+07
75 251 1500	75 258 1500	3890	2.32000E+06	3.55868E+07
75 258 1500	75 265 1500	8500	3.03000E+06	1.01558E+08
75 265 1500	75 272 1445	2450	8.88000E+07	8.57886E+08
75 272 1445	75 280 1220	4150	1.65000E+07	2.70012E+08
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	5090	1.28000E+07	2.56909E+08
75 328 1600	75 335 1555	6930	1.23000E+07	3.36116E+08
WINTER 1975		7399	1.45430E+08	2.82386E+09
SPRING 1975		7491	3.43900E+08	9.75889E+09
SUMMER 1975		3855	1.44642E+08	1.79608E+09
FALL 1975		4956	2.53650E+08	1.92046E+09
TOTAL 1975		5966	8.79522E+08	1.60320E+10

WEIR 105 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	5060	2.15000E+06	2.90107E+08
75 013 1500	75 020 1150	3870	3.43000E+06	3.53976E+08
75 020 1140	75 027 1320	2490	3.41000E+06	2.26424E+08
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	2150	3.92000E+06	2.24747E+08
75 041 1130	75 049 1100	3500	2.94000E+06	2.74400E+08
75 049 1100	75 055 1100	2520	1.74000E+06	1.16928E+08
75 055 1100	75 062 1120	7530	2.33000E+06	4.67864E+08
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	1540	6.44000E+06	2.64469E+08
75 076 1150	75 083 1220	920	1.22000E+07	2.99307E+08
75 083 1220	75 090 1110	3380	5.53000E+06	4.98437E+08
75 090 1110	75 097 1110	2280	2.83000E+06	1.72064E+08
75 097 1110	75 104 1105	4410	1.82000E+06	2.14032E+08
75 104 1105	75 111 1050	3950	2.65000E+06	2.79133E+08
75 111 1050	75 118 1100	3490	3.19000E+06	2.96883E+08
75 118 1100	75 125 1130	3300	5.68000E+06	4.99840E+08
75 125 1130	75 132 1040	2550	3.77000E+06	2.56360E+08
75 132 1040	75 139 1040	2680	4.08000E+06	2.91584E+08
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	2110	1.08000E+06	6.07680E+07
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	3200	2.88000E+05	2.45760E+07
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	46	8.64000E+06	1.05754E+07
75 195 1040	75 202 1030	1290	4.77000E+06	1.64088E+08
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	1610	1.50000E+06	6.44000E+07
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	511	2.27000E+07	3.09325E+08
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	1360	3.89000E+06	1.41077E+08
75 287 0850	75 293 0850	4550	4.64000E+06	5.62987E+08
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		3874	2.33300E+07	1.95445E+09
SPRING 1975		2783	5.24300E+07	3.13288E+09
SUMMER 1975		1536	2.01269E+07	2.63639E+08
FALL 1975		2140	4.65736E+07	1.01339E+09
TOTAL 1975		2812	1.40961E+08	6.36435E+09

WEIR 106 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	5510	5.19000E+06	3.00072E+08
75 013 1520	75 020 1150	4860	5.79000E+06	2.95272E+08
75 020 1150	75 027 1340	5520	6.34000E+06	3.67228E+08
75 027 1340	75 034 1050	5310	4.30000E+06	2.39591E+08
75 034 1050	75 041 1145	6530	6.39000E+06	4.37846E+08
75 041 1145	75 049 1120	3890	6.28000E+06	2.56340E+08
75 049 1120	75 055 1120	4830	3.69000E+06	1.87017E+08
75 055 1120	75 062 1135	5150	4.76000E+06	2.57230E+08
75 062 1135	75 069 1120	8060	2.68000E+06	2.26661E+08
75 069 1120	75 076 1205	1090	1.37000E+07	1.56695E+08
75 076 1205	75 083 1240	582	2.61000E+07	1.59393E+08
75 083 1240	75 090 1130	11200	1.09000E+07	1.28101E+09
75 090 1130	75 097 1125	4720	6.59000E+06	3.26388E+08
75 097 1125	75 104 1125	5740	5.47000E+06	3.29463E+08
75 104 1125	75 111 1105	4310	7.82000E+06	3.53664E+08
75 111 1105	75 118 1110	5840	1.09000E+07	6.67954E+08
75 118 1110	75 125 1150	5420	1.77000E+07	1.00665E+09
75 125 1150	75 132 1055	2470	8.35000E+06	2.16417E+08
75 132 1055	75 139 1100	3050	8.81000E+06	2.81957E+08
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	3690	2.79000E+06	1.08028E+08
75 153 1045	75 160 1055	3330	4.53000E+06	1.58289E+08
75 160 1055	75 167 1030	3590	4.32000E+06	1.62737E+08
75 167 1030	75 174 1020	138	3.81000E+06	5.51710E+06
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	63	2.37000E+07	1.57420E+07
75 195 1050	75 202 .	1500	1.14000E+07	1.79433E+08
75 202 .	75 209 1145	1630	2.58000E+06	4.41280E+07
75 209 1145	75 216 1020	142	1.71000E+06	2.54795E+06
75 216 1020	75 223 1055	1400	1.37000E+06	2.01259E+07
75 223 1055	75 230 1130	2000	5.59000E+06	1.17314E+08
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	3520	2.62000E+06	9.67723E+07
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	8820	1.72000E+06	1.59186E+08
75 265 1100	75 272 1040	17200	5.13000E+07	9.25876E+09
75 272 1040	75 280 0850	22100	6.10000E+06	1.41459E+09
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	5840	1.01000E+07	6.18930E+08
75 293 0900	75 301 1005	6740	6.64000E+06	4.69608E+08
75 301 1005	75 307 0850	9970	4.20000E+06	4.39391E+08
75 307 0850	75 314 1250	2840	4.12000E+06	1.22779E+08
75 314 1250	75 321 1155	2870	1.06000E+07	3.19224E+08
75 321 1155	75 328 1040	2540	4.86000E+06	1.29532E+08
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		5518	4.54200E+07	2.56726E+09
SPRING 1975		4681	1.25340E+08	5.11428E+09
SUMMER 1975		1533	6.73110E+07	7.05833E+08
FALL 1975		8244	1.15510E+08	1.30288E+10
TOTAL 1975		4974	3.50901E+08	2.11895E+10

WEIR 107 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	8480	1.08000E+06	3.24766E+08
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	4590	2.58000E+06	4.19936E+08
75 013 1600	75 021 1220	6360	2.94000E+06	6.63064E+08
75 021 1220	75 027 1020	6110	2.34000E+06	5.07000E+08
75 027 1020	75 034 0955	9090	1.80000E+06	5.80213E+08
75 034 0955	75 041 1030	9770	4.05000E+06	1.40314E+09
75 041 1030	75 049 1025	10000	3.04000E+06	1.07801E+09
75 049 1025	75 055 1020	2500	1.74000E+06	1.54255E+08
75 055 1020	75 062 1040	7080	2.43000E+06	6.10085E+08
75 062 1040	75 069 1000	6770	1.45000E+06	3.48103E+08
75 069 1120	75 076 1045	6450	6.52000E+06	1.49128E+09
75 076 1045	75 083 1110	7950	7.84000E+06	2.21021E+09
75 083 1110	75 090 1030	6830	4.25000E+06	1.02934E+09
75 090 1030	75 097 1025	8870	3.49000E+06	1.09774E+09
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	8700	2.28000E+06	7.03404E+08
75 111 1015	75 118 1005	9230	2.40000E+06	7.85532E+08
75 118 1005	75 125 1045	5890	4.05000E+06	8.45904E+08
75 125 1045	75 132 1000	8230	2.93000E+06	8.55103E+08
75 132 1000	75 139 0950	8100	3.73000E+06	1.07138E+09
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	5850	1.15000E+06	2.38564E+08
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	6410	9.51000E+05	2.16167E+08
75 167 0935	75 174 1107	643	9.19000E+05	2.09545E+07
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	173	4.22000E+06	2.58887E+07
75 195 0955	75 202 1000	3270	3.68000E+06	4.26723E+08
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	377	8.28000E+05	1.10694E+07
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	1950	.	.
WINTER 1975		7075	2.73040E+07	6.08857E+09
SPRING 1975		7534	4.37500E+07	1.06766E+10

WEIR 107 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		2175	1.65460E+07	7.00803E+08
FALL 1975		1950	1.24900E+06	.
TOTAL 1975		6141	8.73990E+07	1.71178E+10

WEIR 108 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	5200	8.92000E+06	3.08404E+08
74 357 1120	74 364 1110	6880	2.57000E+06	1.17564E+08
74 364 1110	75 006 1315	6720	3.18000E+06	1.42085E+08
75 006 1315	75 013 1245	5170	6.23000E+06	2.14156E+08
75 013 1245	75 020 1110	5520	1.15000E+07	4.22074E+08
75 020 1110	75 027 1240	6990	1.05000E+07	4.87999E+08
75 027 1240	75 034 1340	6540	6.94000E+06	3.01779E+08
75 034 1340	75 041 1340	7080	1.27000E+07	5.97846E+08
75 041 1340	75 049 1455	7510	1.06000E+07	5.29295E+08
75 049 1455	75 055 1345	6480	6.55000E+06	2.82207E+08
75 055 1345	75 062 1340	7020	8.26000E+06	3.85540E+08
75 062 1340	75 069 1230	8930	5.57000E+06	3.30719E+08
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	7520	3.64000E+07	1.82000E+09
75 083 1500	75 090 1405	7780	2.49000E+07	1.28805E+09
75 090 1405	75 097 1510	8410	1.12000E+07	6.26277E+08
75 097 1510	75 104 1525	8470	8.94000E+06	5.03469E+08
75 104 1525	75 111 1530	5960	1.20000E+07	4.75532E+08
75 111 1530	75 118 1500	8520	1.22000E+07	6.91117E+08
75 118 1500	75 125 1545	8010	2.28000E+07	1.21428E+09
75 125 1545	75 132 1545	8360	1.93000E+07	1.07279E+09
75 132 1545	75 139 1440	7870	1.19000E+07	6.22693E+08
75 139 1440	75 147 1415	8280	9.20000E+06	5.06489E+08
75 147 1415	75 153 1630	3960	9.92000E+06	2.61191E+08
75 153 1630	75 160 1510	3770	6.59000E+06	1.65188E+08
75 160 1510	75 167 1400	5440	6.61000E+06	2.39085E+08
75 167 1400	75 174 1300	1390	4.48000E+06	4.14043E+07
75 174 1300	75 181 .	6520	1.95000E+06	8.45346E+07
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	1370	4.57000E+07	4.16283E+08
75 195 1515	75 202 1440	2000	2.51000E+07	3.33777E+08
75 202 1440	75 209 1330	3350	6.67000E+06	1.48567E+08
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	1740	6.27000E+06	7.25386E+07
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	1850	1.56000E+06	1.91888E+07
75 237 1345	75 244 1155	1130	9.72000E+06	7.30293E+07
75 244 1155	75 251 1325	3920	4.44000E+06	1.15723E+08
75 251 1325	75 258 1445	8060	1.63000E+06	8.73524E+07
75 258 1445	75 265 1440	3530	3.49000E+06	8.19129E+07
75 265 1440	75 272 1415	2180	1.14000E+08	1.65239E+09
75 272 1415	75 280 1150	6770	1.32000E+07	5.94176E+08
75 280 1150	75 287 1220	5480	2.13000E+07	7.76090E+08
75 287 1220	75 293 1145	5990	1.72000E+07	6.85027E+08
75 293 1145	75 301 1210	22200	1.32000E+07	1.94840E+09

WEIR 108 1975 TOTAL CALCIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	4240	8.68000E+06	2.44702E+08
75 307 1320	75 314 1545	4150	8.49000E+06	2.34265E+08
75 314 1545	75 322 1255	3280	2.23000E+07	4.86330E+08
75 322 1255	75 328 1540	3430	8.63000E+06	1.96814E+08
75 328 1540	75 335 1520	3590	8.23000E+06	1.96447E+08
WINTER 1975		6670	1.07090E+08	4.11967E+09
SPRING 1975		7672	2.28430E+08	9.41261E+09
SUMMER 1975		2856	1.26513E+08	1.59360E+09
FALL 1975		5909	2.44790E+08	7.29964E+09
TOTAL 1975		5838	7.01253E+08	2.20948E+10

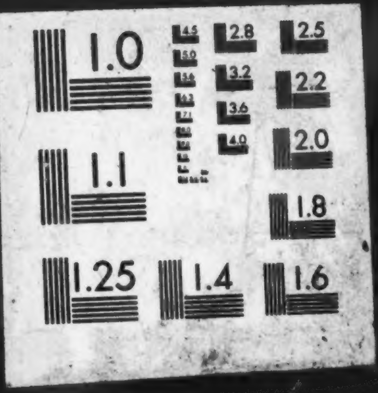
WEIR 101 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1030	74 343 1045	.	8.94000E+06	.
74 343 1045	74 350 1130	.	7.26000E+06	.
74 350 1130	74 357 1000	3080	1.39000E+07	1.89517E+08
74 357 1000	74 364 0925	2400	4.92000E+06	5.22709E+07
74 364 0925	75 006 1115	2760	5.46000E+06	6.67092E+07
75 006 1115	75 013 1100	2250	1.23000E+07	1.22510E+08
75 013 1100	75 020 1000	2690	1.84000E+07	2.19106E+08
75 020 1000	75 027 1105	2570	1.65000E+07	1.87716E+08
75 027 1105	75 034 1145	2210	1.18000E+07	1.15440E+08
75 034 1145	75 041 1240	3130	2.04000E+07	2.82656E+08
75 041 1240	75 049 1340	3020	1.67000E+07	2.23258E+08
75 049 1340	75 055 1205	2890	1.02000E+07	1.30491E+08
75 055 1205	75 062 1225	3070	1.33000E+07	1.80748E+08
75 062 1225	75 069 1210	.	8.99000E+06	.
75 069 1210	75 076 1320	.	3.25000E+07	.
75 076 1320	75 083 1345	4120	5.73000E+07	1.04505E+09
75 083 1340	75 090 1245	3080	3.10000E+07	4.22665E+08
75 090 1245	75 097 1215	2970	1.74000E+07	2.28765E+08
75 097 1215	75 104 1210	2690	1.25000E+07	1.48849E+08
75 104 1210	75 111 1205	2850	1.70000E+07	2.14475E+08
75 111 1205	75 118 1205	3300	1.86000E+07	2.71713E+08
75 118 1205	75 125 1305	3000	3.08000E+07	4.09031E+08
75 125 1305	75 132 1135	3070	2.27000E+07	3.08495E+08
75 132 1135	75 139 1150	2490	2.22000E+07	2.44701E+08
75 139 1150	75 147 1130	3050	1.18000E+07	1.59318E+08
75 147 1130	75 153 1355	2520	7.37000E+06	8.22151E+07
75 153 1355	75 160 1150	2570	6.23000E+06	7.08769E+07
75 160 1150	75 167 .	3430	5.45000E+06	8.27512E+07
75 167 .	75 174 1125	2200	6.64000E+06	6.46658E+07
75 174 1125	75 181 .	.	1.94000E+06	.
75 181 .	75 188 1045	.	9.94000E+05	.
75 188 1045	75 195 1220	3150	3.78000E+07	5.27092E+08
75 195 1220	75 202 1140	2050	2.82000E+07	2.55910E+08
75 202 1140	75 209 1205	2770	8.55000E+06	1.04841E+08
75 209 1205	75 216 1100	2400	4.55000E+06	4.83400E+07
75 216 1100	75 223 1130	2130	6.08000E+06	5.73280E+07
75 223 1130	75 230 1200	2230	1.34000E+07	1.32280E+08
75 230 1200	75 237 1105	.	4.09000E+06	.
75 237 1105	75 244 1020	1700	1.07000E+07	8.05224E+07
75 244 1020	75 251 1130	2240	9.93000E+06	9.84648E+07
75 251 1130	75 258 1145	.	3.72000E+06	.
75 258 1145	75 265 1150	1760	5.27000E+06	4.10589E+07
75 265 1150	75 272 1200	2770	8.27000E+07	1.01407E+09
75 272 1200	75 280 0925	3330	1.84000E+07	2.71235E+08
75 280 0925	75 287 0920	3170	2.45000E+07	3.43803E+08
75 287 0920	75 293 0950	2080	2.20000E+07	2.02568E+08
75 293 0950	75 301 1040	2100	1.71000E+07	1.58964E+08

WEIR 101 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1040	75 307 1040	2640	1.12000E+07	1.30890E+08
75 307 1040	75 314 1330	4200	1.15000E+07	2.13811E+08
75 314 1330	75 321 0920	2160	2.55000E+07	2.43825E+08
75 321 0920	75 328 1150	3170	1.34000E+07	1.88039E+08
75 328 1150	75 335 1145	3200	1.07000E+07	1.51571E+08
WINTER 1975		2734	1.69070E+08	1.77042E+09
SPRING 1975		3013	2.90160E+08	3.53527E+09
SUMMER 1975		2463	1.34624E+08	1.42461E+09
FALL 1975		2735	2.55920E+08	3.05830E+09
TOTAL 1975		2742	8.40784E+08	9.78861E+09

3 OF 3
PB
276997


1.0
4.5
5.0
5.6
6.3
7.1
8.0
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.1
1.8
1.25
1.4
1.6

WEIR 102 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1055	74 343 1105	.	8.29000E+06	.
74 343 1105	74 350 1215	.	6.21000E+06	.
74 350 1215	74 357 1020	1680	1.27000E+07	1.11241E+08
74 357 1020	74 364 1015	1960	5.23000E+06	5.34453E+07
74 364 1025	75 006 1140	2880	4.35000E+06	6.53180E+07
75 006 1140	75 013 1125	2660	1.12000E+07	1.55328E+08
75 013 1125	75 020 1020	2690	1.78000E+07	2.49645E+08
75 020 1020	75 027 1135	2530	1.78000E+07	2.34797E+08
75 027 1135	75 034 1205	2720	1.05000E+07	1.48905E+08
75 034 1255	75 041 1300	2760	1.92000E+07	2.76288E+08
75 041 1300	75 049 1350	2980	1.54000E+07	2.39270E+08
75 049 1350	75 055 1220	2330	9.00000E+06	1.09333E+08
75 055 1220	75 062 1240	2980	1.16000E+07	1.80229E+08
75 062 1240	75 069 1415	3080	6.64000E+06	1.06628E+08
75 069 1415	75 076 1330	.	3.18000E+07	.
75 076 1330	75 083 1400	2530	6.04000E+07	7.96726E+08
75 083 1400	75 090 1300	2700	2.56000E+07	3.60375E+08
75 090 1300	75 097 1240	2620	1.34000E+07	1.83045E+08
75 097 1240	75 104 1225	2620	9.38000E+06	1.28131E+08
75 104 1225	75 111 1225	2610	1.36000E+07	1.85068E+08
75 111 1225	75 118 1225	2870	1.55000E+07	2.31934E+08
75 118 1225	75 125 1320	2740	2.88000E+07	4.11429E+08
75 125 1320	75 132 1150	2860	2.09000E+07	3.11648E+08
75 132 1150	75 139 1205	2750	2.03000E+07	2.91058E+08
75 139 1205	75 147 1150	.	8.91000E+06	.
75 147 1150	75 153 1400	2700	5.75000E+06	8.09437E+07
75 153 1400	75 160 1210	.	4.05000E+06	.
75 160 1210	75 167 1130	.	3.66000E+06	.
75 167 1130	75 174 1135	2830	5.84000E+06	8.61689E+07
75 174 1135	75 181 .	.	1.05000E+06	.
75 181 .	75 188 1055	.	1.10000E+05	.
75 188 1055	75 195 1240	2610	4.92000E+07	6.69510E+08
75 195 1240	75 202 1200	2800	2.68000E+07	3.91241E+08
75 202 1200	75 209 1245	2730	6.30000E+06	8.96715E+07
75 209 1245	75 216 1115	2720	4.15000E+06	5.88530E+07
75 216 1115	75 223 1140	2360	3.90000E+06	4.79875E+07
75 223 1140	75 230 1220	2340	1.73000E+07	2.11064E+08
75 230 1220	75 237 1120	.	2.62000E+06	.
75 237 1040	75 244 1040	.	1.04000E+07	.
75 244 1040	75 251 1145	1540	7.60000E+06	6.10219E+07
75 251 1145	75 258 1200	1310	2.58000E+06	1.76215E+07
75 258 1200	75 265 1205	1660	3.69000E+06	3.19364E+07
75 265 1205	75 272 1230	2250	9.24000E+07	1.08394E+09
75 272 1230	75 280 0940	2200	1.26000E+07	1.44526E+08
75 280 0940	75 287 0940	1880	1.89000E+07	1.85255E+08
75 287 0940	75 293 1010	1920	1.68000E+07	1.68175E+08
75 293 1010	75 301 1055	3130	1.26000E+07	2.05620E+08

WEIR 102 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1055	75 307 1050	2930	8.76000E+06	1.33821E+08
75 307 1050	75 314 1345	1970	7.61000E+06	7.81632E+07
75 314 1345	75 321 0940	2320	2.33000E+07	2.81835E+08
75 321 0940	75 328 1205	3840	1.09000E+07	2.18227E+08
75 328 1205	75 335 1200	3400	8.14000E+06	1.44296E+08
WINTER 1975		2604	1.55920E+08	1.93043E+09
SPRING 1975		2735	2.60980E+08	3.08699E+09
SUMMER 1975		2627	1.35380E+08	1.55450E+09
FALL 1975		2335	2.25880E+08	2.75444E+09
TOTAL 1975		2547	7.71520E+08	9.21972E+09

WEIR 103 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1120	74 343 1130	.	4.83000E+06	.
74 343 1130	74 350 1245	.	4.11000E+06	.
74 350 1245	74 357 1050	2200	8.10000E+06	7.02681E+07
74 357 1050	74 364 1040	2200	2.80000E+06	2.42902E+07
74 364 1040	75 006 1200	.	3.72000E+06	.
75 006 1200	75 013 1200	2060	1.02000E+07	8.28549E+07
75 013 1200	75 020 1040	2300	1.71000E+07	1.55087E+08
75 020 1040	75 027 1155	2120	1.65000E+07	1.37934E+08
75 027 1155	75 034 1400	2080	9.57000E+06	7.84921E+07
75 034 1400	75 041 1455	.	2.09000E+07	.
75 041 1455	75 049 1600	2720	1.64000E+07	1.75899E+08
75 049 1600	75 055 1425	2110	1.01000E+07	8.40339E+07
75 055 1425	75 062 1420	.	1.30000E+07	.
75 062 1420	75 069 1355	2200	8.10000E+06	7.02681E+07
75 069 1355	75 076 1600	.	3.77000E+07	.
75 076 1600	75 083 1545	2530	6.80000E+07	6.78391E+08
75 083 1545	75 090 1350	2380	3.23000E+07	3.03131E+08
75 090 1350	75 097 1540	2090	1.87000E+07	1.54113E+08
75 097 1540	75 104 1540	5160	1.34000E+07	2.72650E+08
75 104 1540	75 111 1555	2120	1.92000E+07	1.60505E+08
75 111 1555	75 118 1540	2180	2.29000E+07	1.96853E+08
75 118 1540	75 125 1615	2620	3.86000E+07	3.98785E+08
75 125 1615	75 132 1610	2030	3.02000E+07	2.41743E+08
75 132 1610	75 139 1515	2560	2.99000E+07	3.01830E+08
75 139 1515	75 147 .	2140	1.48000E+07	1.24890E+08
75 147 1435	75 153 1705	1840	1.01000E+07	7.32808E+07
75 153 1705	75 160 1540	1990	7.29000E+06	5.72047E+07
75 160 1540	75 167 1505	2960	6.65000E+06	7.76183E+07
75 167 1505	75 174 1245	2520	1.25000E+07	1.24211E+08
75 174 1245	75 181 .	2070	2.13000E+06	1.73860E+07
75 181 .	75 188 1310	.	3.92000E+05	.
75 188 1310	75 195 1600	2490	4.75000E+07	4.66384E+08
75 195 1600	75 202 1515	2110	2.91000E+07	2.42118E+08
75 202 1515	75 209 1400	2300	7.22000E+06	6.54811E+07
75 209 1400	75 216 .	1680	3.15000E+06	2.08675E+07
75 216 .	75 223 1450	1840	4.09000E+06	2.96751E+07
75 223 1450	75 230 1530	.	1.15000E+07	.
75 230 1530	75 239 1040	1810	7.61000E+06	5.43143E+07
75 239 1040	75 244 1220	1910	5.51000E+06	4.14988E+07
75 244 1220	75 251 1415	1640	4.30000E+06	2.78076E+07
75 251 1500	75 258 1500	1490	2.32000E+06	1.36309E+07
75 258 1500	75 265 1500	1820	3.03000E+06	2.17453E+07
75 265 1500	75 272 1445	1390	6.88000E+07	4.86719E+08
75 272 1445	75 280 1220	2450	1.65000E+07	1.59405E+08
75 280 1220	75 287 .	.	2.45000E+07	.
75 287 0940	75 293 1215	.	1.88000E+07	.
75 293 1215	75 301 1240	.	1.66000E+07	.

WEIR 103 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1240	75 307 .	.	1.16000E+07	.
75 307 1332	75 314 .	.	1.27000E+07	.
75 314 1605	75 322 1315	.	2.94000E+07	.
75 322 1515	75 328 1600	3870	1.28000E+07	1.95331E+08
75 328 1600	75 335 1555	1950	1.23000E+07	9.45781E+07
WINTER 1975		2221	1.45430E+08	8.79127E+08
SPRING 1975		2487	3.43900E+08	2.97644E+09
SUMMER 1975		2153	1.44042E+08	1.19676E+09
FALL 1975		2087	2.53650E+08	9.99217E+08
TOTAL 1975		2261	8.79522E+08	5.98127E+09

WEIR 105 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 006 1535	75 013 1500	2620	2.15000E+06	1.50213E+08
75 013 1500	75 020 1150	1940	3.43000E+06	1.77445E+08
75 020 1140	75 027 1320	1460	3.41000E+06	1.32763E+08
75 027 1320	75 034 1035	.	1.91000E+06	.
75 034 1035	75 041 1130	1800	3.92000E+06	1.88160E+08
75 041 1130	75 049 1100	1970	2.94000E+06	1.54448E+08
75 049 1100	75 055 1100	1900	1.74000E+06	8.81600E+07
75 055 1100	75 062 1120	1840	2.33000E+06	1.14325E+08
75 062 1120	75 069 1050	.	1.50000E+06	.
75 069 1050	75 076 1150	.	6.44000E+06	.
75 076 1150	75 083 1220	2000	1.22000E+07	6.50667E+08
75 083 1220	75 090 1110	1810	5.53000E+06	2.66915E+08
75 090 1110	75 097 1110	1820	2.83000E+06	1.37349E+08
75 097 1110	75 104 1105	2400	1.82000E+06	1.16480E+08
75 104 1105	75 111 1050	1860	2.65000E+06	1.31440E+08
75 111 1050	75 118 1100	2080	3.19000E+06	1.76939E+08
75 118 1100	75 125 1130	1900	5.68000E+06	2.87787E+08
75 125 1130	75 132 1040	1840	3.77000E+06	1.84981E+08
75 132 1040	75 139 1040	1880	4.08000E+06	2.04544E+08
75 139 1040	75 147 1035	.	1.66000E+06	.
75 147 1035	75 153 1030	1580	1.06000E+06	4.55040E+07
75 153 1030	75 160 1030	.	6.12000E+05	.
75 160 1030	75 167 1010	.	5.28000E+05	.
75 167 1010	75 174 1040	3560	2.88000E+05	2.73408E+07
75 174 1040	75 181 .	.	4.02000E+04	.
75 181 .	75 188 0945	.	1.17000E+04	.
75 188 0945	75 195 1040	1530	8.64000E+06	3.52512E+08
75 195 1040	75 202 1030	1200	4.77000E+06	1.52640E+08
75 202 1030	75 209 1100	.	1.10000E+06	.
75 209 1100	75 216 1005	.	5.06000E+05	.
75 216 1005	75 223 1040	.	3.96000E+05	.
75 223 1040	75 230 1120	1470	1.50000E+06	5.88000E+07
75 230 1120	75 237 0956	.	1.85000E+05	.
75 237 0956	75 244 0940	.	1.55000E+06	.
75 244 0940	75 251 1015	.	1.05000E+06	.
75 251 1045	75 258 1045	.	3.21000E+05	.
75 258 1040	75 265 1040	.	5.20000E+05	.
75 265 1040	75 272 1030	985	2.27000E+07	5.96253E+08
75 272 0840	75 280 0840	.	2.63000E+03	.
75 280 0840	75 287 0850	923	3.89000E+06	9.57459E+07
75 287 0850	75 293 0850	1250	4.64000E+06	1.54667E+08
75 293 0850	75 301 0955	.	3.03000E+06	.
75 301 0955	75 307 0840	.	1.64000E+06	.
75 307 0840	75 314 1240	.	1.43000E+06	.
75 314 1240	75 321 1145	.	4.08000E+06	.
75 321 1145	75 328 1035	.	1.90000E+06	.
75 328 1035	75 335 1040	.	1.37000E+06	.

WEIR 105 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		1933	2.33300E+07	1.00551E+09
SPRING 1975		1917	5.24300E+07	2.20261E+09
SUMMER 1975		1940	2.01269E+07	5.91293E+08
FALL 1975		1053	4.65736E+07	8.46666E+08
TOTAL 1975		1817	1.40961E+08	4.64608E+09

WEIR 106 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 007 1605	75 013 1520	2480	5.19000E+06	1.35060E+08
75 013 1520	75 020 1150	2350	5.79000E+06	1.42775E+08
75 020 1150	75 027 1340	2150	6.34000E+06	1.43033E+08
75 027 1340	75 034 1050	2510	4.30000E+06	1.13253E+08
75 034 1050	75 041 1145	2620	6.39000E+06	1.75675E+08
75 041 1145	75 049 1120	.	6.28000E+06	.
75 049 1120	75 055 1120	2310	3.69000E+06	8.94428E+07
75 055 1120	75 062 1135	2800	4.76000E+06	1.39853E+08
75 062 1135	75 069 1120	2680	2.68000E+06	7.53662E+07
75 069 1120	75 076 1205	.	1.37000E+07	.
75 076 1205	75 083 1240	3410	2.61000E+07	9.33903E+08
75 083 1240	75 090 1130	2360	1.09000E+07	2.69927E+08
75 090 1130	75 097 1125	2490	6.59000E+06	1.72184E+08
75 097 1125	75 104 1125	2370	5.47000E+06	1.36033E+08
75 104 1125	75 111 1105	2040	7.82000E+06	1.67396E+08
75 111 1105	75 118 1110	2810	1.09000E+07	3.21396E+08
75 118 1110	75 125 1150	2710	1.77000E+07	5.03326E+08
75 125 1150	75 132 1055	2660	8.35000E+06	2.33064E+08
75 132 1055	75 139 1100	2290	8.81000E+06	2.11699E+08
75 139 1100	75 147 1055	.	3.53000E+06	.
75 147 1055	75 153 1045	1990	2.79000E+06	5.82592E+07
75 153 1045	75 160 1055	2620	4.53000E+06	1.24539E+08
75 160 1055	75 167 1030	3090	4.32000E+06	1.40071E+08
75 167 1030	75 174 1020	3080	3.81000E+06	1.23135E+08
75 174 1020	75 181 .	.	1.74000E+06	.
75 181 .	75 188 1015	.	8.92000E+05	.
75 188 1015	75 195 1050	5090	2.37000E+07	1.26582E+09
75 195 1050	75 202 .	2090	1.14000E+07	2.50010E+08
75 202 .	75 209 1145	2140	2.58000E+06	5.79349E+07
75 209 1145	75 216 1020	2770	1.71000E+06	4.97030E+07
75 216 1020	75 223 1055	2210	1.37000E+06	3.17702E+07
75 223 1055	75 230 1130	2490	5.59000E+06	1.46056E+08
75 230 1130	75 237 1013	.	7.39000E+05	.
75 237 1013	75 244 0930	.	4.93000E+06	.
75 244 0930	75 251 1040	1750	2.62000E+06	4.81112E+07
75 251 1100	75 258 1100	.	7.00000E+05	.
75 258 1100	75 265 1100	2310	1.72000E+06	4.16915E+07
75 265 1100	75 272 1040	3230	5.13000E+07	1.73871E+09
75 272 1040	75 280 0850	3150	6.10000E+06	2.01626E+08
75 280 0850	75 287 0855	.	8.64000E+06	.
75 287 0855	75 293 0900	2450	1.01000E+07	2.59654E+08
75 293 0900	75 301 1005	2810	6.64000E+06	1.95786E+08
75 301 1005	75 307 0850	2790	4.20000E+06	1.22959E+08
75 307 0850	75 314 1250	2240	4.12000E+06	9.68395E+07
75 314 1250	75 321 1155	2240	1.06000E+07	2.49150E+08
75 321 1155	75 328 1040	2900	4.86000E+06	1.47891E+08
75 328 1040	75 335 1055	.	3.91000E+06	.

WEIR 106 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
WINTER 1975		2487	4.54200E+07	1.01446E+09
SPRING 1975		2528	1.25340E+08	3.08255E+09
SUMMER 1975		2842	6.73110E+07	2.18904E+09
FALL 1975		2587	1.15510E+08	3.10242E+09
TOTAL 1975		2608	3.50901E+08	9.31310E+09

WEIR 107 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1500	74 343 1400	.	1.18000E+06	.
74 343 1400	74 350 1610	.	1.53000E+06	.
74 350 1610	74 357 1345	2120	1.08000E+06	8.11915E+07
74 357 1345	74 364 1330	.	5.51000E+05	.
74 364 1330	75 006 1000	.	5.93000E+05	.
75 006 1000	75 013 1600	4770	2.58000E+06	4.36404E+08
75 013 1600	75 021 1220	2800	2.94000E+06	2.91915E+08
75 021 1220	75 027 1020	3290	2.34000E+06	2.73000E+08
75 027 1020	75 034 0955	3330	1.80000E+06	2.12553E+08
75 034 0955	75 041 1030	3180	4.05000E+06	4.56702E+08
75 041 1030	75 049 1025	4780	3.04000E+06	5.15291E+08
75 049 1025	75 055 1020	3720	1.74000E+06	2.29532E+08
75 055 1020	75 062 1040	5310	2.43000E+06	4.57564E+08
75 062 1040	75 069 1000	3030	1.45000E+06	1.55798E+08
75 069 1120	75 076 1045	.	6.52000E+06	.
75 076 1045	75 083 1110	5880	7.84000E+06	1.63472E+09
75 083 1110	75 090 1030	3740	4.25000E+06	5.63652E+08
75 090 1030	75 097 1025	3300	3.49000E+06	4.08404E+08
75 097 1025	75 104 .	.	2.05000E+06	.
75 104 .	75 111 1015	3760	2.28000E+06	3.04000E+08
75 111 1015	75 118 1005	5500	2.40000E+06	4.68085E+08
75 118 1005	75 125 1045	3980	4.05000E+06	5.71596E+08
75 125 1045	75 132 1000	4340	2.93000E+06	4.50929E+08
75 132 1000	75 139 0950	2820	3.73000E+06	3.73000E+08
75 139 0950	75 147 0950	.	1.61000E+06	.
75 147 0950	75 153 0945	5410	1.15000E+06	2.20621E+08
75 153 0945	75 160 0940	.	1.06000E+06	.
75 160 0940	75 167 0935	4930	9.51000E+05	1.66256E+08
75 167 0935	75 174 1107	19900	9.19000E+05	6.48514E+08
75 174 1107	75 181 .	.	4.55000E+05	.
75 181 .	75 188 0910	.	2.42000E+05	.
75 188 0910	75 195 0955	4490	4.22000E+06	6.71908E+08
75 195 0955	75 202 1000	4910	3.68000E+06	6.40738E+08
75 202 1000	75 209 1015	.	1.49000E+06	.
75 209 1015	75 216 .	.	6.43000E+05	.
75 216 .	75 223 1000	.	7.57000E+05	.
75 223 1000	75 230 1045	13900	8.26000E+05	4.08128E+08
75 230 1045	75 237 0908	.	4.52000E+05	.
75 237 0908	75 244 0855	.	8.49000E+05	.
75 244 0855	75 251 0935	.	8.00000E+05	.
75 251 1000	75 258 1000	.	4.49000E+05	.
75 258 1015	75 265 1015	.	.	.
75 265 1015	75 272 0950	3340	.	.
WINTER 1975		3633	2.73040E+07	3.10995E+09
SPRING 1975		4176	4.37500E+07	5.15081E+09

WEIR 107 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
SUMMER 1975		9626	1.65460E+07	2.53554E+09
FALL 1975		3340	1.24900E+06	.
TOTAL 1975		5061	8.73990E+07	1.06405E+10

WEIR 108 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
74 336 1200	74 343 1220	.	6.50000E+06	.
74 343 1220	74 350 1325	.	7.07000E+06	.
74 350 1325	74 357 1120	2720	8.92000E+06	1.61319E+08
74 357 1120	74 364 1110	2120	2.57000E+06	3.62261E+07
74 364 1110	75 006 1315	2400	3.18000E+06	5.07447E+07
75 006 1315	75 013 1245	1880	6.23000E+06	7.78750E+07
75 013 1245	75 020 1110	2230	1.15000E+07	1.70512E+08
75 020 1110	75 027 1240	2130	1.05000E+07	1.48703E+08
75 027 1240	75 034 1340	2020	6.94000E+06	9.32101E+07
75 034 1340	75 041 1340	2520	1.27000E+07	2.12793E+08
75 041 1340	75 049 1455	2550	1.06000E+07	1.79721E+08
75 049 1455	75 055 1345	2200	6.55000E+06	9.58112E+07
75 055 1345	75 062 1340	2660	8.26000E+06	1.46088E+08
75 062 1340	75 069 1230	3370	5.57000E+06	1.24807E+08
75 069 1230	75 076 1445	.	4.41000E+07	.
75 076 1445	75 083 1500	2710	3.64000E+07	6.55878E+08
75 083 1500	75 090 1405	2590	2.49000E+07	4.28797E+08
75 090 1405	75 097 1510	2740	1.12000E+07	2.04043E+08
75 097 1510	75 104 1525	2620	8.94000E+06	1.67625E+08
75 104 1525	75 111 1530	2110	1.20000E+07	1.68351E+08
75 111 1530	75 118 1500	2610	1.22000E+07	2.27939E+08
75 118 1500	75 125 1545	2670	2.28000E+07	4.04761E+08
75 125 1545	75 132 1545	3170	1.93000E+07	4.06789E+08
75 132 1545	75 139 1440	2770	1.19000E+07	2.19169E+08
75 139 1440	75 147 1415	2640	9.20000E+06	1.73723E+08
75 147 1415	75 153 1630	2440	9.92000E+06	1.60936E+08
75 153 1630	75 160 1510	2240	6.59000E+06	9.81489E+07
75 160 1510	75 167 1400	3010	6.61000E+06	1.32288E+08
75 167 1400	75 174 1300	2440	4.48000E+06	7.26809E+07
75 174 1300	75 181 .	3460	1.95000E+06	4.48604E+07
75 181 .	75 188 1230	.	6.73000E+05	.
75 188 1230	75 195 1515	2220	4.57000E+07	6.74561E+08
75 195 1515	75 202 1440	1820	2.51000E+07	3.03737E+08
75 202 1440	75 209 1330	2220	6.67000E+06	9.84535E+07
75 209 1330	75 216 .	.	2.61000E+06	.
75 216 .	75 223 1400	2030	6.27000E+06	8.46283E+07
75 223 1400	75 230 1515	.	8.58000E+06	.
75 230 1515	75 237 1345	2090	1.56000E+06	2.16782E+07
75 237 1345	75 244 1155	1990	9.72000E+06	1.28609E+08
75 244 1155	75 251 1325	1800	4.44000E+06	5.31383E+07
75 251 1325	75 258 1445	2200	1.63000E+06	2.38431E+07
75 258 1445	75 265 1440	1680	3.49000E+06	3.89840E+07
75 265 1440	75 272 1415	1480	1.14000E+08	1.12181E+09
75 272 1415	75 280 1150	2920	1.32000E+07	2.56277E+08
75 280 1150	75 287 1220	3100	2.13000E+07	4.39029E+08
75 287 1220	75 293 1145	3980	1.72000E+07	4.55160E+08
75 293 1145	75 301 1210	6920	1.32000E+07	6.07340E+08

WEIR 108 1975 TOTAL MAGNESIUM
VOLUME INTEGRATED SAMPLES

FROM	TO	CONCENTRATION (UG/L)	TOTAL FLOW (L)	AREA YIELD (UG/HA)
75 301 1210	75 307 1320	2020	8.68000E+06	1.16580E+08
75 307 1320	75 314 1545	2740	8.49000E+06	1.54672E+08
75 314 1545	75 322 1255	2670	2.23000E+07	3.95884E+08
75 322 1255	75 328 1540	5070	8.63000E+06	2.90918E+08
75 328 1540	75 335 1520	2630	8.23000E+06	1.43916E+08
WINTER 1975		2400	1.07090E+08	1.49781E+09
SPRING 1975		2753	2.28430E+08	3.34282E+09
SUMMER 1975		2352	1.26513E+08	1.65964E+09
FALL 1975		3016	2.44790E+08	4.09755E+09
TOTAL 1975		2635	7.01253E+08	1.04730E+10